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INTERURBAN TO MILWAUKEE

Bulletin 106

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Central Electric Railfans' Association

P. O. Box 503

Chicago 90, Illinois

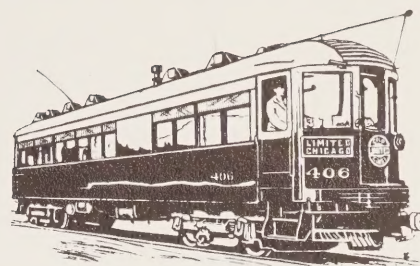
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Introduction

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ABOUT BULLETIN 106

Since 1938 CERA has published bulletins dealing with the history and technology of electric railways. For the last ten years these publications have taken the form of yearbooks, with each issue reviewing the electric lines of a particular state or part of state or covering a large and especially interesting system.

CERA this year gladly returns to the North Shore Line as a publication subject. We have always felt a keen interest in this railway, not only because it is close at hand but because its attitude has kept it in the forefront of modern practice among electric railways. Yet it has retained some of the old-time flavor which marked its early days.

It was partly this diversity, however, which presented a problem to the publications staff in handling the subject. The differing character of the railway at different times during its history has had the effect of multiplying the amount of available material far beyond the capacity of one annual volume.

Therefore, the decision was made to devote two years' research to North Shore Line. Several possibilities in dividing the work between two volumes were studied, and the most workable one seemed to be chronological. As a result, this volume covers the development of the line up to 1926--approximately the halfway mark in the railway's history. A complete roster of rolling stock is included, together with the details of equipment constructed before 1926.

The second half of the story will appear in 1963 as CERA Bulletin 107 and will cover happenings on North Shore Line after 1926. That volume will include comprehensive track maps and details on rolling stock constructed or extensively rebuilt after 1926.

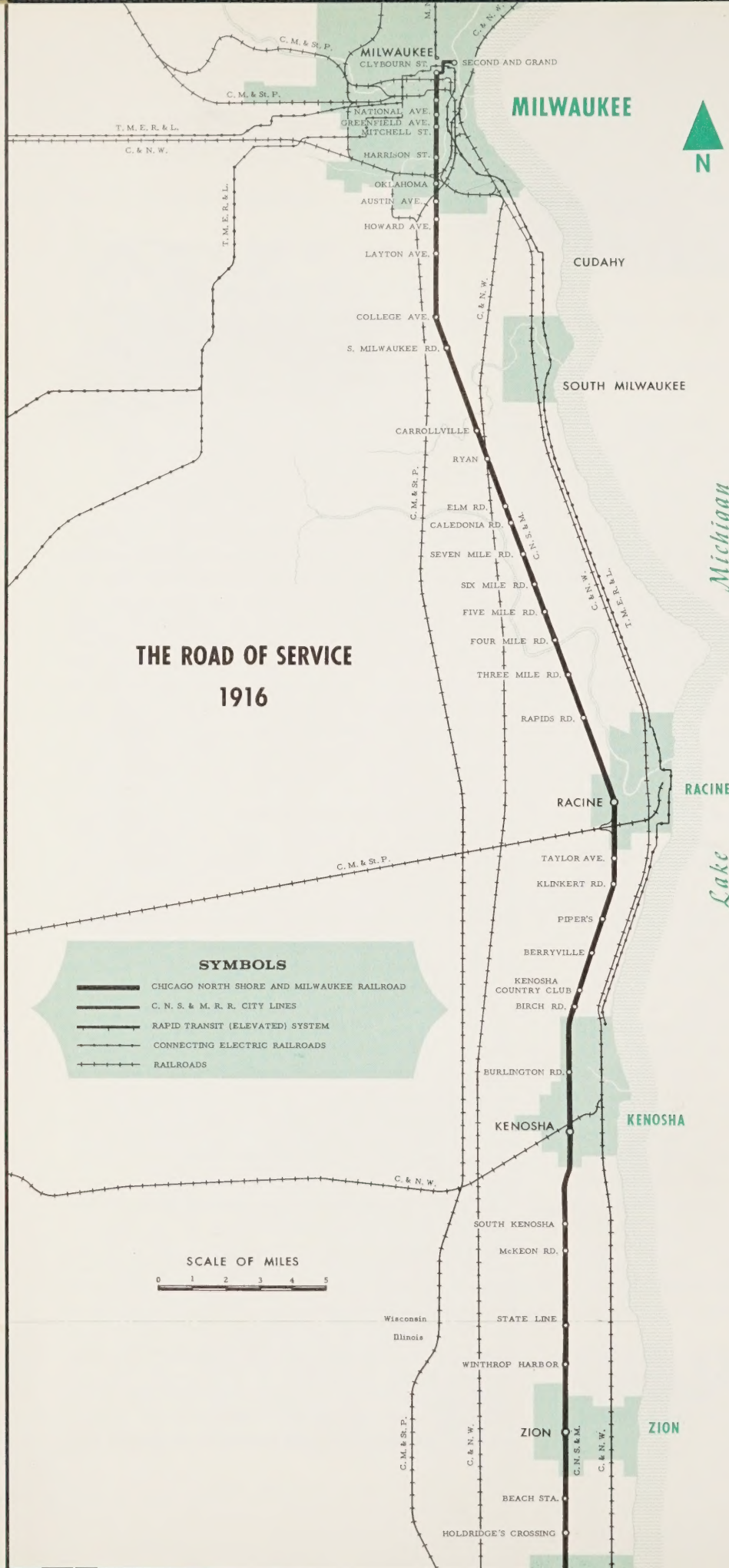
These bulletins are technical, educational references prepared as historical projects by members of the Central Electric Railfans' Association, working without salary in the interests of the subject as a hobby.

ABOUT THE NORTH SHORE

In this day when the industrial and commercial influence of Chicago extends throughout the nation and when the area within forty miles of the city center is almost solidly dotted with suburban municipalities having close economic ties with the city itself, it is difficult to imagine a time when these same outlying villages were nearly self-sufficient settlements, generally isolated from Chicago and from one another. Yet this state of affairs persisted as recently as the early 1900's. In retrospect it is clear that one important factor in the changing nature of the suburban towns was inauguration of easy transportation routes interconnecting them and joining them with the city. A pioneer among the light electric railways and, therefore, a primary cause of the increased suburbanization of communities within its reach was the line which eventually became the Chicago North Shore & Milwaukee Railway.

By pushing a sketchy single track through the groves separating the towns along Lake Michigan north of Chicago during the late 1890's, the electric railway first began to open an easy access route. True, it paralleled a main line of the Chicago & North Western Railway for its entire distance, but that steam railroad had never been able to provide the ten- or twenty-minute service frequency, the low fares, and the numerous conveniently located passenger stops which made a trip to the next town a matter of course rather than an unusual and difficult journey.

Yet within a matter of only a few decades this electric railway had not only shown its ability at handling short-distance local traffic but had secured an entrance into Chicago for its trains and was successfully competing for city-to-city traffic over a distance of ninety miles. The story of the first half of North Shore Line's history is, then, the nostalgic tale of transition from little wooden local streetcars to capacious fifty-ton steel coaches and of the concurrent transition from pastoral residential villages to the beautiful but bustling big-city suburbs of the 1920's.



THE ROAD OF SERVICE 1916

SYMBOLS

- CHICAGO NORTH SHORE AND MILWAUKEE RAILROAD
- C. N. S. & M. R. R. CITY LINES
- RAPID TRANSIT (ELEVATED) SYSTEM
- CONNECTING ELECTRIC RAILROADS
- RAILROADS

SCALE OF MILES



MILWAUKEE

Entry to Milwaukee was on the city streets north of car barn at Harrison Str (at left). In addition to interurban routes shown the map, The Milwaukee Electric Railway & Light Company ran a comprehensive streetcar system. (1 photos, see Pages 44 to 4

THE MILWAUKEE DIVISION

Operation between Milwaukee and Waukegan was high speeds through rural territory. Local trains provided service at flag stops. Some of these stops are indicated on the map. (1 photos, see Pages 37 to 4

THE SYSTEM TODAY

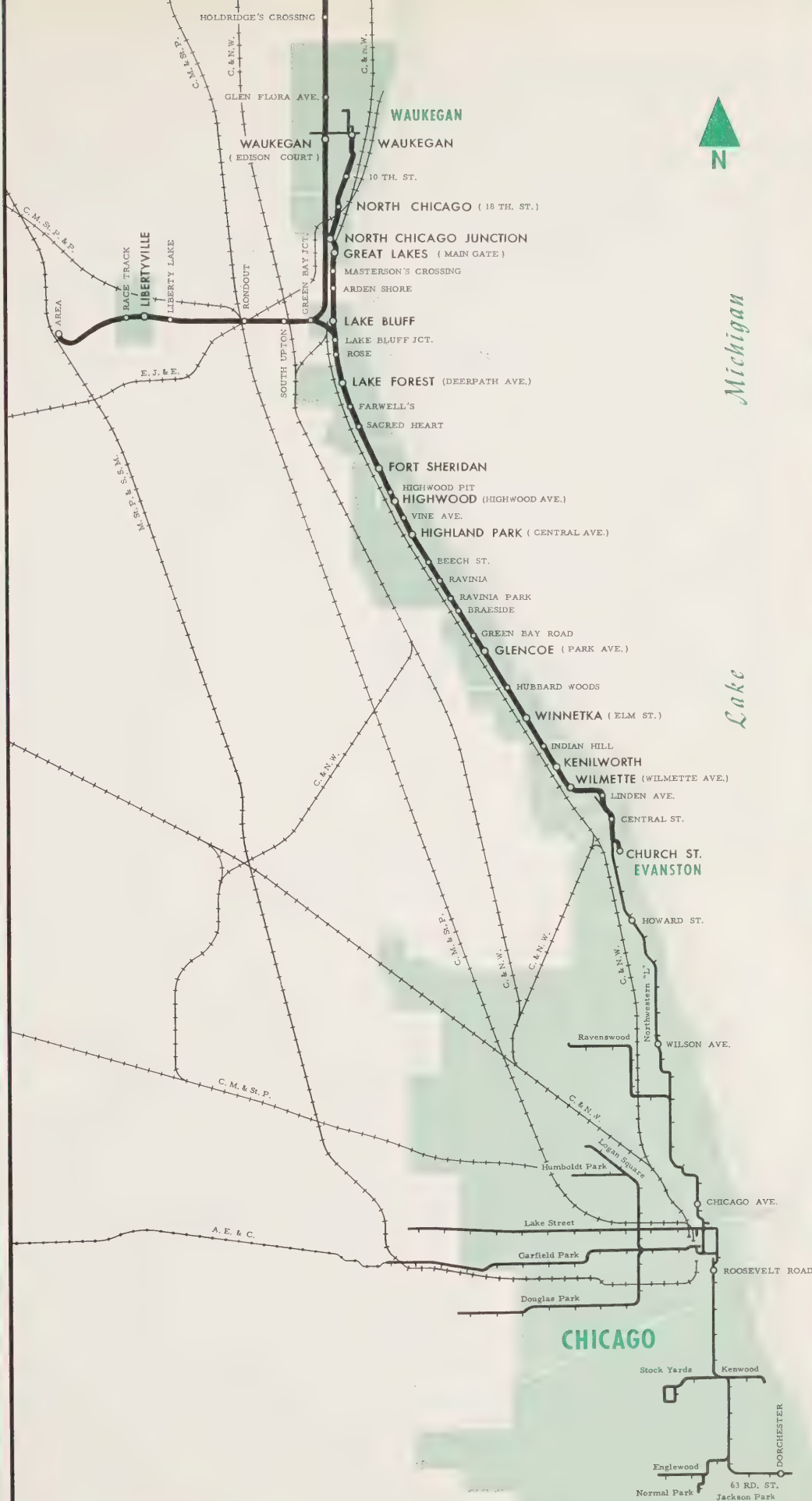
In 1962, North Shore Line still operated between Chicago and Milwaukee, but over the newer Skokie Valley bypass route (not shown on this 1916 map) between Lake Bluff and Howard Street, Chicago. The line from Highland Park toward Evanston and the East Line into Waukegan have been abandoned, while Shore Line Route operations between North Chicago Junction and Highland Park are for freight only. City operations have been dropped. The formerly rural Libertyville Branch has become a suburban-type commuter carrier.

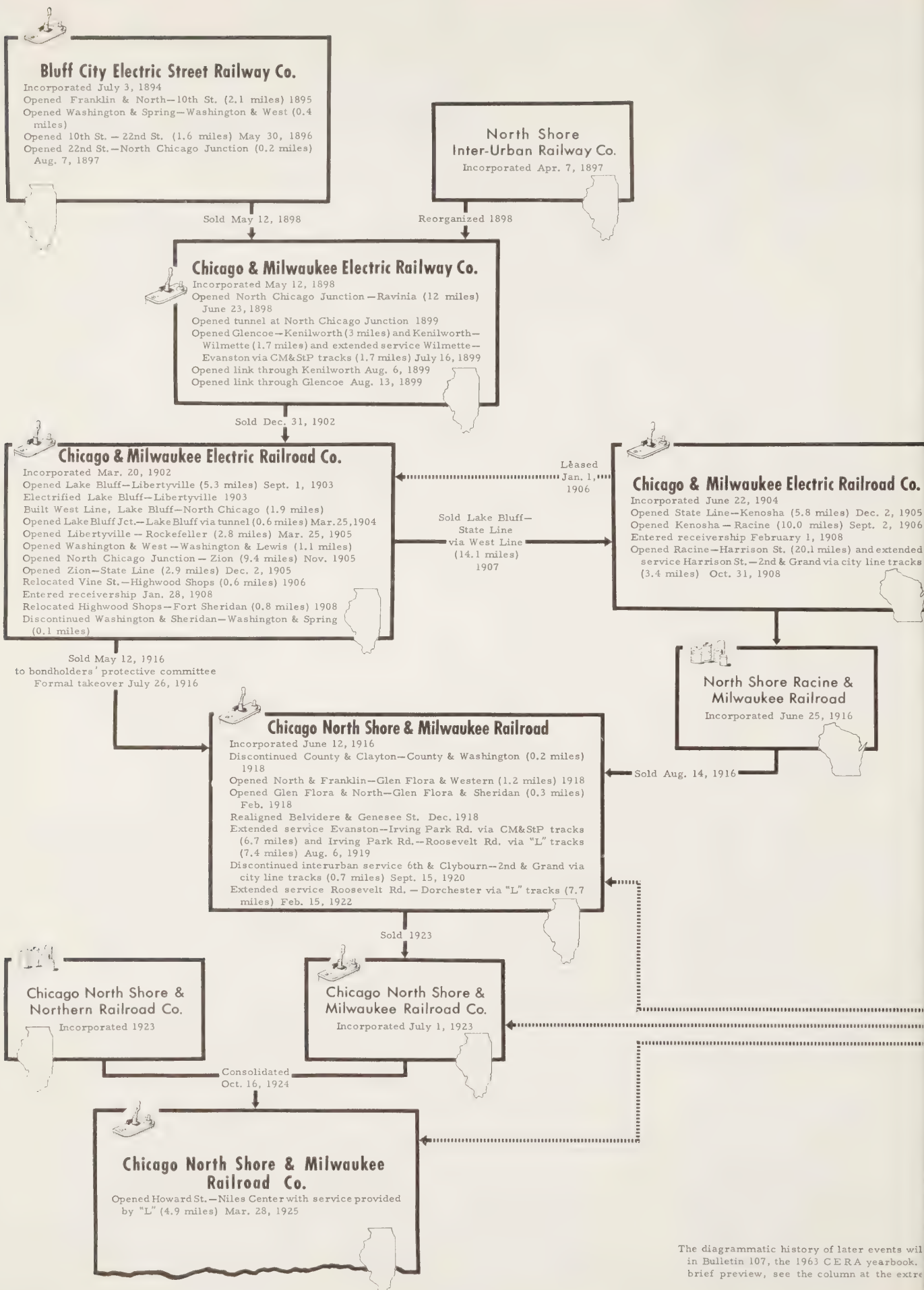
th Shore Line operated
y cars in Waukegan and
the "East Line" (at right)
far south as Great Lakes.
West Line, or Milwaukee
ision, was a high-speed
entirely on private right-
way through the outskirts.
e detailed map, Page 65.)

Service on the branch between Lake Bluff Junction and Green Bay Area (now called Munro Junction) was provided by a single passenger car. Line from Green Bay Junction to North Chicago Junction served only as a freight connection and carried no passenger trains. (For photos, see Pages 30 to 33.)

rations south of Lake
ff were through a suc-
sion of suburban towns.
se closer to Evanston
re more densely settled
e involved considerable
unts of street running.
ntually the Skokie Valley
te was built to bypass
area (map, Page 50).
r photos along the Shore
e, see Pages 8 to 42.)

th Shore Line in 1916
not enter Chicago itself;
sengers changed to ele-
ed railway trains or to
etcars at Evanston. But
in a few years, trackage
ts as far as Dorchester
ion (below right) were
red.





The diagrammatic history of later events will in Bulletin 107, the 1963 CERA yearbook. brief preview, see the column at the extre

Family Tree...
Diagrammatic
History

Operator of railway service
under its own name

Owner but not operator of
railway lines

of symbol indicates company
owned no railway lines)




Illinois corporation

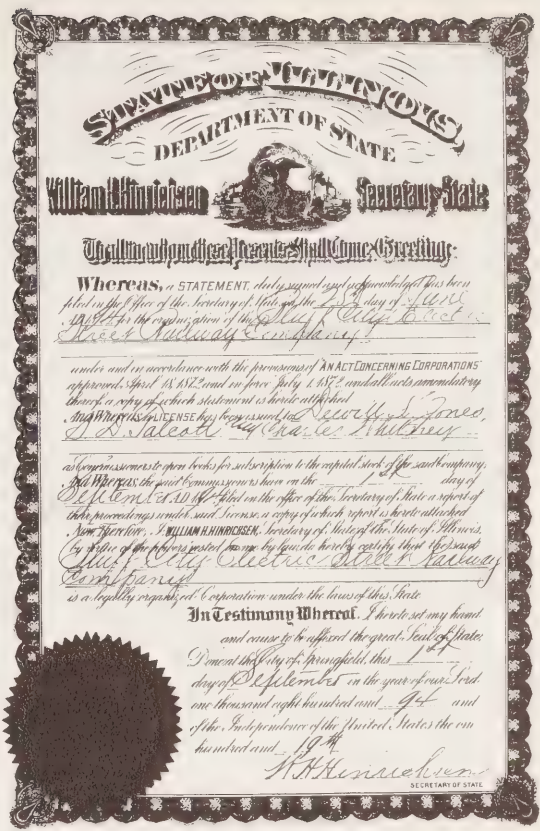



Wisconsin corporation

Subsidiary
1905 to Jan. 1909



Kenosha City Railway Co.
Incorporated Apr. 28, 1902




The document that started it all.
Facsimile of the incorporation certificate
of the Bluff City Electric Street Railway
Company, first organization that can
be considered a direct ancestor of the
present-day North Shore Line.


Preview -
Developments
after 1926

(To be covered in detail in CERA Bulletin 107)

diary
21, 1923



Chicago & Milwaukee Electric Railway Co.
Incorporated Jan. 30, 1906
Opened Harrison St.—6th St. (2.1 miles) Sept. 1, 1907
Suspended Harrison St.—6th St. Dec. 10, 1907
Opened Harrison St.—2nd & Grand (3.4 miles) Oct. 9, 1908
Extended service Harrison St.—Oklahoma Av. via interurban tracks (0.5 miles)
Relocated 5th & Madison—6th & Scott (0.1 miles) summer 1925



- 1926—Open new "Skokie Valley Route" from Dempster Street to Lake Bluff, retaining old main line as the suburban "Shore Line Route."
- 1941—Inaugurate streamlined "Electroliners."
- 1947—Substitute buses for the Waukegan streetcar line and extreme north portion of the Shore Line Route.
- 1951—Discontinue Milwaukee streetcar service.
- 1955—Discontinue Shore Line Route passenger service, retaining portion of line from Highland Park to North Chicago Junction for shop access and freight traffic.
- 1958—Request for the first time to abandon the entire system. By late 1962, discontinuance of service has not occurred.

The Story of North

The business men away back in the "Mauve Decade" who started a local street railway line in Waukegan, Illinois, certainly couldn't have imagined that their project would grow into a railway whose cars would race at high speed through the towns and across the countryside between Chicago and Milwaukee, a distance of nearly ninety miles. Nevertheless, it was their company that eventually became the Chicago North Shore & Milwaukee Railway, one of the nation's best-known and longest-lived electric railways.

There had been other ideas for transportation lines in Waukegan, but the initial company underlying North Shore Line, the Bluff City Electric Street Railway Company, was incorporated on September 1, 1894. A lightly built single track was completed during 1895 and service began over a route of about two miles. Initially the line extended from Franklin Street and North Avenue to the south city limits at 10th Street. Two second-hand single-truck cars were sufficient at first.

(Continued on page 10)



Shore Line

South end of the interurban's track for a while was in front of the Chicago Milwaukee & St. Paul Railway's Evanston depot (below).

From left to right in this view, looking north from Davis Street in August, 1908, are a "St. Paul" road freight track, the northbound main track (electrified for Chicago elevated trains, which then operated left-handed), the high-level "L" train platform, the southbound main, the interurban stub track, and Benson Street. (CEK)



Flagship of the North Shore Line fleet in 1917, the Gold Coast Limited (at left) poses at Church Street, Evanston, with a brand new parlor-diner bringing up the rear.

BLUFF CITY ELECTRIC EXTENDS ITS LINE

Within a few months of the start, however, a short branch was constructed on Washington Street to West Street. Another extension, partially on private right-of-way, brought the line one and one-half miles farther south through the adjoining town of North Chicago.

Clarence Murray, boniface of the Murray Hotel, doubled as manager of the road until 1898 and directed the enterprise from a room in his hotel at the northwest corner of Madison and Genesee Streets.

Waukegan streets were unpaved in the early days, and oldtimers say that at certain times of the year the mud was literally knee-deep. Narrow plank walks were constructed at street corners from the sidewalk to the car tracks. One of the most important skills of the motorman was the ability to stop the cars with the steps immediately opposite these walks.

Late in 1895, C. E. Loss, a railroad man from New York, took over management of the line. With the outside influence came the feeling that the company could successfully operate more than a short city line in two adjoining towns. Consequently, early in the following year the powers of the company were enlarged to permit its operation throughout Lake County and also into Cook County, a dozen miles to the south. As soon as

the new authority was granted, the line was extended a few hundred feet south to the present location of North Chicago Junction. From here progress was halted by the unwillingness of the Chicago & North Western Railway to permit a desired crossing to the east side of their right-of-way.

CORPORATE NAME AND PROPERTY EXPAND

The growing interest of financiers in electric railways for intercity travel was reflected in a series of moves during 1897 and 1898 resulting in formation of the North Shore Inter-Urban Railway Company, later the Chicago & Milwaukee Electric Railway Company. On May 12, 1898, this company purchased the property and franchise of the Bluff City Electric. Mr. George A. Ball of Muncie, Indiana, manufacturer of the famous Mason Jars, became president.

Ball began to expand the property and, as the first move, built a single-track line along the east side of the North Western tracks. Beginning at a point opposite the present North Chicago Junction, this disconnected portion continued south through Bluff City (now Lake Bluff), Lake Forest, Highwood, and Highland Park to a wooded area just north of the Lake-Cook county line. Although the route was principally on privately owned right-of-way, public streets were used

It's about 1914 as we catch a glimpse of C&ME's Evanston terminal with an "L" train hurrying by and the inevitable lineup of wooden cars behind the ticket office. (WDR)



in several of the villages. A long trestle was required to cross a ravine at Vine Avenue, just north of Highland Park.

At Highwood, where the interurban was to cross the Chicago & North Western's spur track to Fort Sheridan, the C&NW again opposed construction of an intersection. The railroad kept a locomotive on the track and squirted live steam at the interurban construction crews as they approached to do any work nearby. Despite such difficulties, a single track crossing at this location was soon installed.

NEW CARS ENTER SERVICE

All this expansion meant that purchase of sufficient rolling stock had to come soon. New single-truck cars 1, 2, and 3 were hauled up a muddy hill to the trolley tracks from the C&NW yards in Waukegan. Car 4 was placed in service on the longer but less heavily populated section of line between North Chicago and Highland Park.

An article in the Chicago Inter Ocean for September 11, 1898, described the line as follows:

Skimming over the ravines and through the tree trunks [sic] of the pretty wooded country around Fort Sheridan is an electric car. It seems strangely out of place so far away from the city, frightening the birds and the rabbits with its noisy

gong and whirring trolley wheel. With the rails on which it runs hidden from sight by the golden rod and wild asters, and with its trolley poles concealed by the branches of the trees, it hurries along, around curves, over hills, and through groves, a vision of the city seen in the heart of the country.

This bucolic idyll is a far cry from the eighty-mile-per-hour limiteds on the present-day Skokie Valley Route, yet in the same article, the Inter Ocean writer goes on to describe the new company's plans to build a line which would ultimately reach Milwaukee.

C & ME ESTABLISHES HIGHWOOD SHOPS

Shops, carbarns, power plant, and general offices for the road were established at Highwood, Illinois, near the Fort Sheridan Army post. The first unit of the Highwood shops was constructed in 1898 and has been supplemented since by the additional buildings and yard facilities needed to care for an increased amount of rolling stock. Another addition, in 1905, was the substantial and handsome brick office building.

Doing all it could to build up business, the road in 1901 established Sheridan Park at the south end of the Highwood property. This installation included an open-air park, dance hall, beer garden, and theater.

When direct operation into Chicago became possible, the Evanston station was rearranged to handle through trains. Upper platforms were added, and the old station building was enlarged by addition of an ornamental front entrance. Cars shown in this June 1929 view are for Evanston-Waukegan locals. (GK)



THE EVANSTON- WAUKEGAN LINK DEVELOPS

An annoying problem for the first several months of intercity operation was the break in the line at the south edge of North Chicago pending arrangements to cross the Chicago & North Western right-of-way there. During 1899 a tunnel was constructed under the railroad tracks, which at this point ran on a high fill across the valley of the little Pettibone Creek. The little cars from Waukegan thereafter bobbed down into the hollow, twisted through the underpass, and emerged upgrade bound for Highland Park.

The Ball administration also began a program of double-tracking the line between Waukegan and Highland Park, and this was soon completed except for two-thirds of a mile at Lake Forest, where the side-of-road layout left space for only a single track.

A contract was awarded to the North American Construction Company to build a double-track line southward from the end of rail at Highland Park to Wilmette. The line continued to parallel the C&NW's Milwaukee Division, although it made considerable use of public streets and roads in some of the villages. There was a long trestle from the Railroad Men's Home in Highland Park south to Ravinia and another around Winnetka Avenue (Indian Hill station). These trestles, as well as the one at Vine Avenue, were later graveled in, using material from a quarry which the railway later reached at Libertyville.

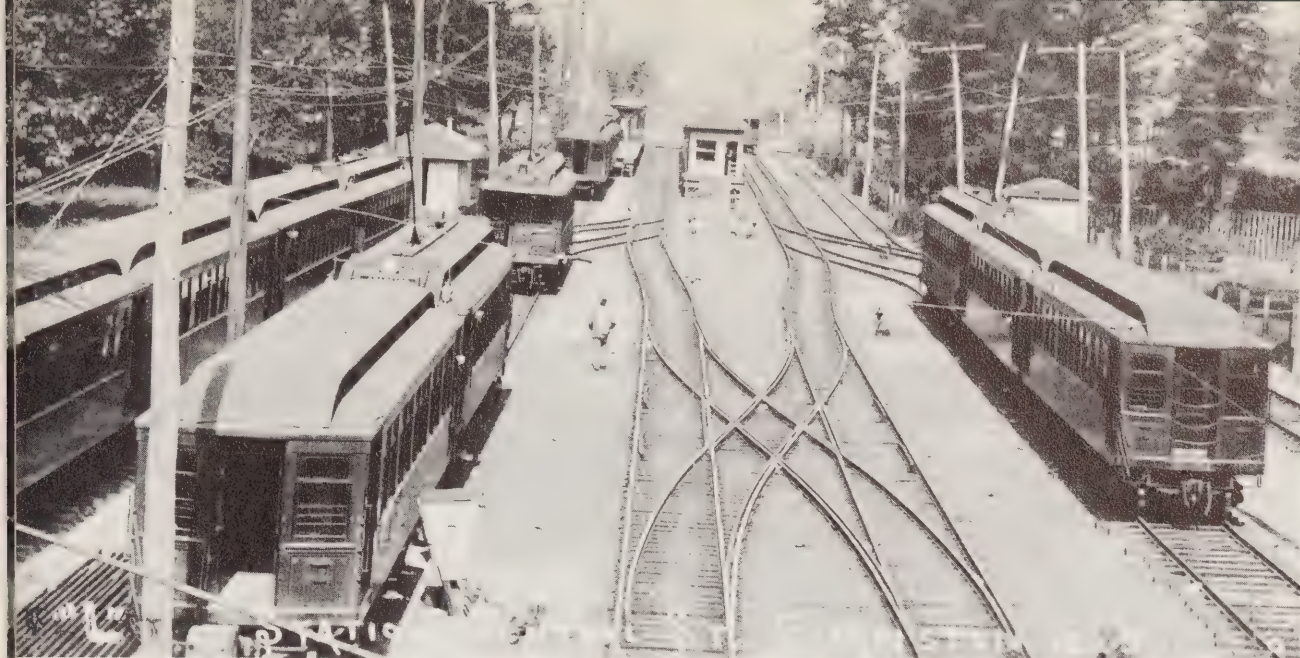
In Wilmette, the line turned east in Greenleaf Avenue for several blocks, then swung south to connect with the Chicago Milwaukee & St. Paul's Evanston Branch at a point near Linden Avenue, then called Llewellyn Park. The "St. Paul's" branch had been operated at quite a loss, so the steam road under an agreement dated March 3, 1899, permitted the electric line to use its track as far south as Church Street in Evanston.



Made up and ready to go is a Milwaukee Limited of the 1910 era (at left) with two coaches and a 400-class parlor-buffet car. Dimly seen in the distance is the Evanston terminal yard at Church Street. (GK)

A 1928 view at the same place (at right) is indicative of freight house facilities in the smaller towns. Note local cars at station in the distance and upper level platforms for through trains into Chicago. (GK)





Central Street, Evanston, was the north end of elevated train operation and boasted a few storage tracks. Note low ratio of "L" motor cars to trailers. Chicago & Milwaukee Electric car in station is about to cross the Evanston car line enroute to Waukegan. (BN)

Heterogeneous four-car Waukegan train pulls out of the Linden Avenue stop and eases onto Greenleaf Avenue for seven blocks of street running. (CEK)



The extension was completed in July, 1899, except through the village of Kenilworth, where a franchise had not yet been obtained, and across a ravine south of Glencoe where the bridging work was proceeding slowly. A trial run was made into Evanston on Friday, July 14, 1899. Two days later cars began operating between Evanston and the south limits of Kenilworth and, separately, between the north end of the "Kenilworth Gap" and Glencoe. Over the two-block stretch in Kenilworth, passengers either walked or were conveyed in horse-drawn vehicles.

In August an agreement was reached with the village and on the 6th of the month, cars began running directly from Evanston to Glencoe. A week later the through Evanston-Waukegan service began. At the time, the 28-mile run was Chicago's longest interurban.

CHICAGO CONNECTIONS ARE ARRANGED

To provide Chicago delivery, joint tickets with the "St. Paul" were sold. Most of the steam road's Evanston Branch trains terminated at Davis Street, one block south of Church, and the electric line's track extended along the side of a street for that block to terminate right in front of the Evanston "St. Paul" depot.

Another attempt at joint ticketing with Chicago connections was tried in 1904. A combination transfer ticket included a coupon good on the Evanston streetcar line from Central Street, Evanston, to Limits carhouse on Chicago's North Side. Here a second connection was made with the Wells or Clark Street cable cars, which operated to the downtown district. This slow, inconvenient arrangement did not long survive,

After traversing Greenleaf Avenue, car #121 swung around the turn and into Wilmette Avenue stop. The wooded area of 1912 has today given way to houses, commercial blocks, and even a few new apartment buildings, with only the colonnaded municipal building remaining as a landmark.

(AWJ)



but while it lasted it stood as probably the only case of through ticketing between interurban and cable routes.

Certainly the interurban wanted to improve its Chicago entry. By the early years of the twentieth century, C&ME hoped to extend its service, perhaps over the "St. Paul" tracks, to Wilson Avenue on Chicago's North Side. At this point, a direct transfer could have been made to the Northwestern Elevated Railroad (not related to the Chicago & North Western Railway), which had reached that point in 1900.

When "L" connections did come, however, they were made possible by extension of the elevated line rather than of the interurban. During 1907 the Northwestern "L" arranged to operate over the "St. Paul's" Evanston Branch from Wilson Avenue past the C&ME terminal at Church Street to Central Street, Evanston. A partnership agreement of the three companies was reached on August 22, 1907, covering this operation subject to the terms of C&ME's 1899 lease. Negotiations continued until May 16, 1908, when the "L" agreed permanently to maintain the prop-



erty and furnish all electric power for a consideration of $17\frac{1}{2}\text{¢}$ per car-mile operated by the C&ME between Central and Church Streets.

The "St. Paul" road eventually ceased passenger operation into Evanston, although it retained title to the trackage for some years. The "L" became Chicago & Milwaukee Electric's primary connection into Chicago. Gradually the inter-urban's track contacting the railroad station at Davis Street became unnecessary, and Church Street came to be the south end of C&ME rail.

ADMINISTRATION IS A BIT INFORMAL

In the early 1900's, there was no formal system of train dispatching. Cars operated in suburban street railway style; if an overdue opposing car failed to show at one of the remaining single-track sections, a lengthy delay would result. To eliminate such delays, trainmen gradually fell into the habit of phoning Miss Dillie Nevins, bookkeeper and cashier at Highwood. Dillie knew everyone on the road and if an opposing car had been delayed, she would



Although photographed in 1929, the scene on the opposite page captures the spirit of the old-time local service joining the lake shore communities. (WBC)

Also at Kenilworth, a longer local headed by #305 (at left) waits on the exchange of entering and leaving passengers. (GK)

usually have heard of it and would tell the waiting crew that it was safe to proceed. Thus, besides handling the books and taking care of the money, Dillie served informally as train dispatcher and practically ran the railroad.

In 1905 A. L. Drum was appointed General Manager and Peter Naumes became Superintendent of Motive Power. Dillie married Naumes and retired to run her household. However, veteran railroaders of the time said that Dillie was as good an official as they ever worked under.

Another difference between the earliest years and more recent times is emphasized by the following order:

To Trainmen

Commencing September 1, 1899 all trainmen in the employ of this Company will receive 19¢ per hour for the period of one year. They will then receive 20¢ per hour.

All trainmen employed September 1, 1899 or after are to receive 17¢ for the first six months, 18¢ for the next six months, 19¢ for the next 12 months, then 20¢.

It is related by oldtimers that there were no rules as to working hours. The usual working day was twelve hours, but they were often required to work continuously much longer when necessary.

FINANCIAL CONTROL AGAIN CHANGES

The financial backing for a series of improvements was laid in 1902 when George A. Ball sold his interest in the company to A. C. Frost of Chicago. At this time the securities of C&ME consisted of a \$5 million, 5% bond issue and \$5 million in capital stock. Frost was a promoter and was able to persuade banks and individuals to buy additional securities, thus obtaining funds which were used to reconstruct the existing line and to build an extension north toward Milwaukee. Under his control a new corporation, the Chicago & Milwaukee Electric Railroad Company, was organized to handle the new construction work.

Frost not only made financial arrangements, but also frequently rode up and down his railway visiting the construction jobs. Many stories are told about his contacts with veteran employees. One of the enginemen, Merle Young, commented in later years: "I always used to take A. C. Frost out on inspection in my locomotive, and Mr. Frost always gave me \$10 except one time when he had a lady friend with him and the tallow pot fell into his lady friend's lap. Instead of getting \$10, I got a good bawling out."

The story of Conductor William Ives, later a trainmaster, suggests that promoters don't always understand operating conditions. He relates "A. C. Frost was on our car one day and Frank Curley was the motorman. Curley slowed up for the first curve at Fort Sheridan, and Frost came out on the front platform and told him he didn't have to slow up on that curve, which put Mr. Frost through the window"!

A BRANCH TO LIBERTYVILLE IS ADDED

Extension of the railway in a new direction was initiated in 1902, when the North American Construction Company received a contract to build a branch line west from Lake Bluff to Libertyville. According to original plans, the branch would make grade crossings of the ridge at Green Bay Road and the Chicago Milwaukee & St. Paul Railway at Rondout.

Before much work had been done, however, Mr. Frost took over the interurban line. Now that new capital was available, plans were revised to provide for a deep cut at Green Bay Road and an embankment with overhead bridge at Rondout. The contract for completion went to the Republic Construction Company, also a Frost organization, consideration being \$300,000 in stock of the new C&ME Railroad and \$300,000 in bonds.

One of the reasons for construction of the new branch was an old gravel pit along the Desplaines River just east of Libertyville. This location

(Continued on page 17)





Roomy station facilities at Indian Hill, as well as coaches laid up on the siding, can be accounted for by the proximity of New Trier High School. (ADD)

yielded material for ballasting the track on existing lines and on proposed extensions. Steam construction locomotives hauled gravel from this pit and from the Green Bay cut for the embankment at Rondout. A sinkhole encountered there also consumed many thousands of cubic yards of material before it could be stabilized. A pair of contractors' dump cars is said to be buried somewhere in the Rondout fill due to a derailment which had thrown them irretrievably off the temporary trestle during the job of filling it in.

STEAM-POWERED SERVICE BEGINS

No physical connection to the C&ME main line at Lake Bluff was initially built, since the Chicago & North Western Railway tracks for the third time in the history of the interurban provided an obstruction to the latter's tracks. On September 1, 1903, the branch was nevertheless opened to service between the west side of the C&NW at Lake Bluff and the handsome brick station at Milwaukee Avenue, Libertyville.

Elm Street, principal stop in Winnetka, was a center of community activity. 1925 view includes lengthening of platforms for 6-car trains.



Originally, service was provided by one of the steam construction locomotives pulling an open trailer. After about three months, however, a jumper connection was installed for power and an electric car was dragged across the C&NW tracks at Blodgett Avenue, Lake Bluff, to service the Libertyville run.

Since the C&NW did not seem immediately willing to permit a crossing at Lake Bluff, the interurban constructed a double-track connecting line along the west side of the railroad's

right-of-way. Joining the Libertyville Branch at Green Bay Junction to the interurban main line at the south edge of North Chicago, this new "West Line" meant that all of C&ME's tracks were once more physically connected. Regularly scheduled service was apparently not operated on the West Line since the main route paralleled it across the North Western tracks only a few hundred feet to the east. The West Line in later years became a rather deteriorated single track until, in 1925 and 1926, it was completely re-



constructed as part of the new high-speed Skokie Valley Route.

Improvements came quickly to the Libertyville Branch after its opening. By 1904 the tunnel under the C&NW tracks at Lake Bluff was finally pushed through and the branch was extended to a junction with the east line of the interurban. Thereafter, branch passengers could transfer to the Evanston-Waukegan cars without walking across the steam railroad tracks.

A single-track extension to the west, opened

on March 25, 1905, brought the Libertyville Branch to the town of Rockefeller, later known as Area and today as Mundelein. Planning for a further extension beyond this point to the Fox Lake region was done, but the route was never lengthened. A 1912 report of the H. M. Byllesby Company, consulting engineers, suggests that such an extension might have proved profitable, tapping the lake area with its many vacation spots and serving a dairy region which was an especially important part of the Chicago milkshed.



Elm Street in an earlier era.
Lone combination baggage
car #201 handles a south-
bound schedule about 1912.
(AWJ)



The pulling power of C&ME's locomotives is attested to by the string of North-western Elevated Railroad trailers shown arriving at Ravinia Park (at left). (GK)

Homeward bound passengers board a southbound train (at right) while others await an extra on the center track or a southbound Chicago & North Western train on tracks in foreground. (WER)

REACHING OUT TOWARD MILWAUKEE

Even while the Libertyville Branch was still under construction, Frost pushed his plans to extend the road to Milwaukee. During the winter of 1903 and 1904 surveys were made for extending the line from the present North Chicago Junction through the western parts of Waukegan and Zion to the Illinois-Wisconsin state line.

Negotiations were opened with John Alexander Dowie, head of the Zion religious colony, for 2³/₄ miles of right-of-way through Zion City. On March 1, 1904, the company paid Dowie \$101,000 for this right-of-way and a perpetual franchise. Right-of-way in North Chicago and Waukegan had not yet been acquired, so actual construction work on the extension started in Zion. The Dowie organization secured the contract for grading and construction of bridges and work was prosecuted vigorously during 1904. To get materials on the ground, a Chicago & North Western spur into Zion was extended to the interurban's right-of-way. Construction to the state line continued throughout 1905.

Engineering standards in this section were higher than on any of the road's previous construction. The route was almost perfectly straight and overpasses were used at several

street and road intersections. These were sturdy plate girder structures with concrete abutments arranged for an ultimate four tracks. Some of these bridges, in Zion City, spanned nonexistent streets that were at that time just being laid out. In fact, one of these spans, over the site of half of a wide boulevard, still has nothing passing under it!

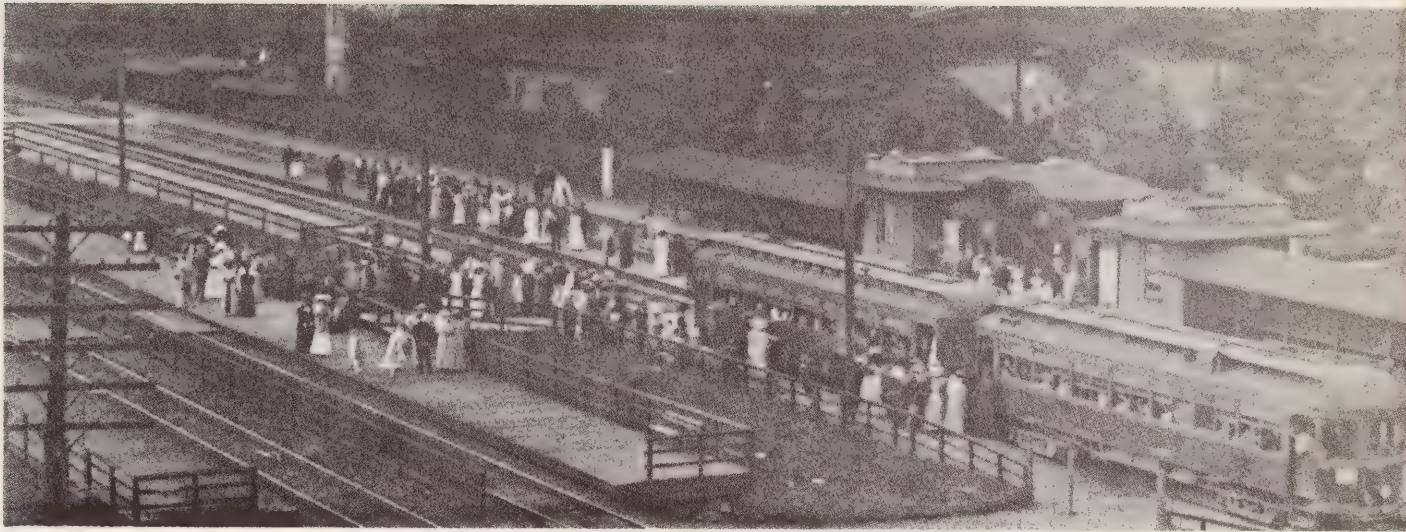
A large, elaborate brick station building and a passenger shelter designed to steam-railroad standards of the day conformed to village specifications. Unfortunately, the population of Zion never grew enough to fill the capacity of the town's spacious layout or the interurban's huge station.

THE LINE ENTERS WISCONSIN

A company in Wisconsin with the same name as the Illinois organization, the Chicago & Milwaukee Electric Railroad Company, but usually called the C&ME Railroad Company of Wisconsin to avert confusion, was incorporated in 1904 to build north of the state line. This company was always closely linked with the C&ME of Illinois and was, in fact, leased to the latter company in 1906.

Northbound extra train with a motor pulling and a motor pushing two open cars arrives on the center layup track at Ravinia Park.





The Wisconsin corporation in January 1905 had issued \$10 million in bonds guaranteed by the Illinois company. This bond issue was one of the causes of the legal difficulties which were soon to beset the system. Construction was, however, pushed along quickly and on December 2, 1905, the first trains were operated to Kenosha. This extension made possible for the first time travel between Chicago and Milwaukee entirely by traction. The route would have involved use of the Limits cable car line in Chicago, a streetcar to Evanston, then the C&ME to Kenosha, a connecting Kenosha Electric Railway streetcar, and finally The Milwaukee Electric Railway and Light Company's interurban line onward from the city limits of Kenosha. Such a slow and difficult route would certainly have appealed to few riders!

Opening of C&ME's Kenosha-Racine segment on September 2, 1906, brought to Wisconsin the phenomenon of two interurban railways competing for traffic between the same two cities. C&ME was not, however, directly parallel to The Milwaukee Electric, either in this area or over the Racine-Milwaukee section where duplication came later; somewhat different local territory was traversed between towns.

The route surveyed in Wisconsin was just as straight as that in Illinois. Over the 35-mile distance from the state line to a point not far south of Harrison Street, Milwaukee, there were only seven curves in the right-of-way. Even these were all of the 15-minute to one-degree varieties, having radii of over a mile. One stretch north of Racine was perfectly straight for a distance of nearly 13 miles. Grades, too, were gentle; the steepest one over the 35-mile stretch amounted to only 32 feet of climb per mile.

THE MILWAUKEE ENTRY IS COMPLETED

As there was some question of the C&ME Railroad's authority to operate on the streets of Milwaukee, the C&ME Railway Company was incorporated in Wisconsin as a terminal company. The route under this ownership extended from Harrison Street, then the south city limits of Milwaukee, through the streets toward downtown. On September 1, 1907, a portion of this line began operating in city service.

During the "Rich Man's Panic" of 1907, difficulties appeared in financing construction and buying equipment. As a result, work was practically suspended on the part of the line between Racine and Harrison Street, Milwaukee. On December 31, 1907, a request was made for receivership of the Illinois company. However, Charles G. Dawes, later Vice-President of the United States, agreed to act as arbitrator to keep the company from going into receivership. This effort did not work out successfully, receivers for the Illinois company being appointed on January 28, 1908. On February 1st, the same men were appointed receivers for the Wisconsin company.

FINALLY, THE LINK IS FINISHED

Money became available to complete the line, although not to the elaborate standards which had characterized the first part of the Milwaukee Division only a few years before. The section still uncompleted at the start of the receivership did, however, include some of the heaviest construction on the railway. The Root River valley near Four Mile Road, north of Racine, required a long, high timber trestle as well as extensive amounts of earth fill. Other principal trestles



A trestle just north of Ravinia stop in Highland Park is the location of this northbound combination baggage car. Note "banjo" signal on the paralleling Chicago & North Western Railway. (GK)

Street running through Highwood, represented in a view (at right) looking south to Highwood Avenue, was eliminated in 1906. (MW)

spanned the Chicago Milwaukee & St. Paul and Chicago & North Western railways where these lines used the lowlands of the Kinnickinnic River valley to enter Milwaukee. In the region near South Milwaukee, the line ran for several miles on a low fill, and smaller trestles of a few spans each were used to cross country roads here. Even apart from the major construction items, though, driving a straight and nearly level railroad through the irregular countryside required considerable amounts of expensive cut and fill work.

Double track was completed according to original plans where tracklaying work had already begun. To lessen the immediate costs of construction, however, most of the eight-mile section from Carrollville substation to Harrison Street was initially completed as single-track railway on a grade adequate for double track. The Root River trestle, also, provided for only one track and thus caused a short stretch of single main at that point. The line became fully operable and train service began on October 31, 1908, completing the continuous link between Evanston and Milwaukee. Interurban luxury of the 1910 era followed within two years as parlor-buffet cars were installed on several trips each day.

LINE IMPROVEMENTS SPEED SERVICE

While concentrating on the job of completing the extension into Milwaukee, the A. C. Frost management had not overlooked improvements in the older portions of the line. A considerable part of the Lake Bluff-Wilmette section had originally been located on city streets. Even though

non-rail street traffic of the day could not have been particularly plentiful, C & ME saw the street-running portions as being an obstruction to improvement of schedule speeds. As early as 1902 the line started purchasing property for new street alignments, dedicating this land to the city, and then being granted the old street alignment as private right-of-way. Stretches of the line were thus freed from the streets in Highland Park, Lake Bluff, and Winnetka. Similar procedures were still being carried on in the 1920's, when the long North Gate-Sacred Heart stretch was made private right-of-way.

In Highwood, a new railway alignment was established on private right-of-way, bringing the line along the west instead of the east side of the shop property and eliminating a circuitous routing through the streets. Such devices by no means discontinued street running, however. Several troublesome stretches still plagued the railway decades later.

During the same period a number of the original trestles in these communities were filled in or replaced with permanent bridges. One of the biggest jobs was undertaken in 1914 on the north end of the railway when the Root River trestle was replaced with a permanent, double-track steel viaduct. A combination of through and deck girder bridges with the road's only through truss was created to replace another timber trestle near Milwaukee.

The year 1915 also saw purchase of the first steel coaches, numbers 150 to 164, from the J. G. Brill Company of Philadelphia. Geared for higher speeds than the older wooden cars, this equipment was initially assigned to the Evanston-Milwaukee limited operations.



FINANCIAL FIASCOS MAKE THE HEADLINES

The receivership, which lasted from 1908 to 1916, was marked by a long and bitter contest between various financial interests involved. There was litigation between bondholders' committees concerning the legality of the various bond issues and what the bonds constituted a lien on. The tangled affairs involving the Wisconsin and Illinois railway companies, the Republic Construction Company, and A. C. Frost, Inc., provided a field day for lawyers.

Interests controlling The Milwaukee Electric Railway & Light Company tried to gain control of the C&ME through purchase of bonds. John I. Beggs, president of the Milwaukee property, tried to secure a group of bonds held by Dutch interests. Early in 1912 he discovered that a Canadian group had acquired the Dutch bonds.

He then gave up his dream of extending TMER&L to Chicago and sold out his C&ME holdings to the Canadian interests.

In August 1912, the Federal court in Milwaukee issued a decree ordering the sale of the Wisconsin company and foreclosure of the \$10 million mortgage held in Chicago. Rumors began to circulate that Samuel Insull, president of the Commonwealth Edison electric company, would purchase a majority of the stock of the reorganized interurban. The sale was accomplished, but at such a low price that the court was petitioned to set the transaction aside. Since there had been only one bidder, many security holders felt that the sale was intended to drive out the small stockholders. In January 1913, the District Court in Chicago nullified the sale of the Illinois properties.

(Continued on page 26)

Coach #129 loads from sidetrack at Washington Street, Highwood. C&ME main tracks are beyond the passenger shelter, and the Chicago & North Western right-of-way is beyond them. (MW)





The storage tracks paralleling the main line at the south end of Highwood yard were always a spot to view older cars awaiting their next local or tripper run. Even as late as 1926, a varied collection of wooden cars, work car #19, and line car #604 (right back-ground) could be seen at "ready." (GK)



Sketch suggests inspection facilities right on the main line in front of the office building—hence the indelible name "Highwood Pit" for the location.



View to the north, taken about 1916, includes main line tracks in foreground, with power house at the left and carbarns in the right background. (PS)

Another glance at the Highwood property, looking west from Sheridan Road, views the east end of the carbarns.



A group of security holders refused to deposit their securities, so that the reorganization was not then effected despite all the litigation. Early in 1914, the Federal court in Milwaukee ordered a resale of the property. Eventually agreement was reached and in 1916 a reorganization plan including Insull was worked out. It has been estimated that during the course of the receivership at least 85 lawyers were involved and more than \$1 million was spent on legal fees.

THE "NORTH SHORE LINE" NAME ARRIVES

On July 26, 1916, the railway was reorganized as the Chicago North Shore & Milwaukee Railroad. As prophesied in rumors for several years, Samuel Insull, even then a successful financial and operating utilities man, became board chairman. Two other names appearing on the North Shore Line roster were prominent in Chicagoland electric railway affairs for many years afterward: Britton I. Budd and Bernard J. Fallon, the new President and Chief Engineer respectively.

As a financial sendoff, \$5 million in first mortgage bonds was issued and an additional \$5 million was authorized for acquiring new property. Capital stock was set at \$100,000 against which participation certificates were issued to the bondholders of the predecessor companies.

The property was to a great extent deteriorated. While rolling stock had been augmented during the receivership and some improvements had been made, the attention of the management

had largely been diverted from the railroad to the courtroom. An appraisal of the property in 1916 showed an investment of \$12,252,000 upon which a return of 2.76% had been earned during the final year of receivership. The gross operating revenue during that year was only \$1,038,183. The property was no small one, but it could certainly earn more if improved.

WORLD WAR I CAUSES NEW ACTIVITY

In 1917 the Fort Sheridan Army reservation and Great Lakes Naval Training Station, which had been a minor base just south of North Chicago for eleven years, became veritable beehives of activity. At one time over 40,000 men were stationed at Great Lakes. North Shore Line could not have been better situated to handle passenger traffic at either location, serving both installations by stations right at the gates. Facilities had to be expanded in a number of cases, however. To handle the heavy weekend-leave traffic at Great Lakes, special trains of Chicago elevated cars were operated between downtown Chicago and Main Gate station at the naval reservation, where high-level platforms were constructed expressly for this service. Such a special operation avoided the necessity of transferring to the "L" at Evanston.

Where the traffic could be expected to decline at the end of the war, temporary structures were utilized. A station at Masterson's Crossing, Great Lakes, for example, was moved to Highwood at war's end and served as a barber shop on the office property.

Fort Sheridan provides the backdrop for a view north at the Highwood yard. Car in service on old main line along Sheridan Road (right center) dates photo to 1908 or before. Dispatcher then occupied a lineside booth (lower right corner) and received a firsthand view of operations. (GK)





Each of the principal series of interurban cars owned by the Wisconsin company is represented at Lake Forest (above). Parlor-buffet car #401 leads off, with coach #301 behind and a 200-class combination baggage car in the distance. (GK)

Stations other than those at the defense installations saw rebuilding where necessary. Overhaul of the electrical system was undertaken. Another requirement of operations became apparent in 1917 and 1918, when a program of equipping principal vehicle crossings with warning devices was begun. North Shore Line, like other rail carriers of the time, made use of both automatic wigwag signals and attended crossing gates, depending upon motor traffic density at each location. At a few crossings use was made of electric bells, operated like the wigwags by wheel-contact devices placed alongside the rails to give a 30-second warning of the approach of trains. All crossings along the Evanston-Waukegan line outside street-running territory were equipped with some form of protection, including watchmen with "stop" discs in a few locations where village authorities or residents objected to fixed warning signals. Also signalled were a few crossings on the Milwaukee Division where there was heavy traffic or a hazardous condition limiting visibility.

AN UNUSUAL WINTER HINDERS OPERATIONS

January, 1918, is remembered as a month of unusually heavy snowfall along the western shore of Lake Michigan. In facing the ordeal of keeping tracks clear and giving its patrons as nearly

as possible an uninterrupted service, the North Shore Line made something of a record for itself. It was the only road which operated between Chicago and Waukegan continuously throughout the two January storms, and the service all the way to Milwaukee was tied up for only one whole day. Perhaps earlier difficulties had given the line the experience with which to meet such problems, for as early as 1906 the railway had been struck with blizzards heavy enough to stop service—for 42 hours on that first occasion.

It was not alone in passenger service that the North Shore Line proved its superiority under adverse circumstances, although that attracted probably the most public attention. It also proved to be a lifesaver in hauling meat, milk, and coal to on-line towns which would otherwise have suffered serious inconvenience.

The meat packers by 1918 had established what seemed excellent and efficient distribution systems by truck. However, once the drifts piled up, rubber-tired transport was helpless. The North Shore Line offered its facilities and was able to keep a steady flow of meat moving into the area between Evanston and Lake Forest.

With coal already short due to wartime requirements and delays to the steam railroads, the further delays caused by the blizzard would



When snow drifted over the tracks about 1918, lucky was the crew that was operating one of the powerful new cars like #160. (RR)

have been disastrous. No town in the area had a supply of more than a day or two on hand. The Lake Forest waterworks was in actual danger of a shutdown. North Shore Line distributed its own supply of coal to dealers along the line. More was secured from the coal pile of the Chicago elevated railroads and distributed via "L" and North Shore Line to relieve some consumers who could get coal no other way.

Keeping the lines open during the storm was no small task. At some places, especially near Winthrop Harbor, the drifts were six to eight feet in depth. A small army of men kept on the job steadily, day and night. Some of the crews and officials worked as long as 48 hours at a stretch without sleep. They did not always have regular meals, but they were determined to make a record for the road and they achieved their goal.

SOME TRAINS ARE MAROONED

Typical was the experience of Motorman J. L. Stephens, who left Evanston on a Milwaukee Express at 3:05 AM on Saturday, January 12. The train of a coach and a combination baggage car plowed through the drifts in fairly good order

until Waukegan was reached. North of Waukegan the train stuck in a drift and was unable to move. Tied up for nearly nine hours, the crew became famished and was half frozen with the cold. They saw two young women struggling to them through the drifts. The girls invited them into a farmer's house where they had a dinner fit for a banquet hall. Hardly had they finished when an army of 100 snow shovelers came along and announced that the line was clear to Zion.

They moved on to Zion where they were stuck again, this time from 5 PM Saturday until 9 AM the next day, when they were ordered to return to Highwood. Here they were supplied with food and slept in the cars. By Monday the line was cleared and they reached Milwaukee about 10:30 AM.

The Libertyville shuttle car left Lake Bluff on one trip Friday afternoon and was not heard from until Sunday. A plow was sent out after the car. It too got stuck. A train of the powerful 150-series steel cars followed and finally effected the rescue, also bringing in the passengers from a Milwaukee Road train which had been stuck at Rondout.

After snow plows and trains had passed repeatedly through the drifts, snow became packed



In this view, looking north at Lake Bluff Junction, the Libertyville Branch disappears downhill at left to duck under the Chicago & North Western. In the distance can be discerned the C&NW's Lake Bluff station and the two passenger shelters at the next interurban stop up the line. Wagon track at the right is Sheridan Road. (GK)

between the rails so hard that it interfered with safe operation. A disc harrow was borrowed from a farmer, and Chief Engineer B. J. Fallon attached it to the end of a car to chop out the frozen snow between the rails.

Master Mechanic Henry Cordell and the shop forces worked around the clock and kept as many cars as possible running. But the weather conditions were such that at one time during the storm more than 60% of the equipment was awaiting repair.

THE COMPANY ORGANIZES FOR SERVICE

Faced with a rapid development of the operating territory, the new management planned to keep pace by improving service and making betterments to plant and equipment. Insull had the drive—and the access to capital—to carry out his plans.

A Budget and Expense Committee was created to deal with operating and capital budgets. The Auditing Department developed a complete cost-accounting system and issued regular reports to all officials so that they could follow the progress and efficiency of each department. A Rate Committee and an Authority for Expenditures

Committee were formed to make recommendations to the management in their own fields. Frequent meetings of the executive and supervisory forces were planned to tighten control and see that all parts of the railway organization were oriented to providing the best possible service to the public.

North Shore Line joined a number of railway associations, including the Association of Western Railways, the American Short Line Railroad Association, the Bureau of Railway Time Service, the Bureau of Commercial Economics, the Bureau of Safety, the National Safety Council, the Western Railroad Passenger Association, the Great Lakes-Chicago Ticket Office Committee, the Southern Ports Foreign Freight Committee, the Trans-Continental Freight Bureau, the Western Trunk Line Committee, the Western Weighing and Inspection Bureau, the Western Demurrage Association, the Western Railroad Military Bureau, and various freight tariff groups including the National Issues Bureau and Joint Tariff Association. Clearly the new management thought of the line as itself a railroad rather than as an interurban line merely supplementing the services of the steam railroads.

(Continued on page 31)



Traveling west from Lake Bluff on the Libertyville Branch, one crossed the Chicago & North Western main line by subway, that road's freight line at grade, and the Chicago Milwaukee & St. Paul on a viaduct, but passed no sizable settlements until reaching Libertyville (above). Eastbound car #11 is shown pausing there on the return trip. The large station, which exists today minus windmill and water tank, contained a substation and an apartment for the agent as well as the waiting room. (HGF)

Steam locomotive #165 (at right) opened the Libertyville Branch, which was then still isolated from the main line. Trolley wire had already been installed, but the branch was yet energized.



Locomotive #5 represented another type of steam motive power used in constructing the Libertyville branch. In scene at left, it worked the Liberty Lake gravel pit just east of Libertyville. (WDR)



Operating at high speed through a heavily developed area with most street and highway crossings at grade made an accident-prevention program essential. The Safety Department of North Shore Line was responsible for hundreds of lectures given to school children in the area. Posters, decals, and even newspaper advertisements carried the "safety" message to the public. The railway's own employees in particular were frequently met with cautions in a day before the word "safety" was as firmly fixed in the minds of all as in our day.

To facilitate the attendance of track men at safety meetings, coach 301 was fitted out for use as a lecture room. On a typical day, it would cruise along a section of line picking up groups of section hands. The car would park on a siding while the safety director gave his talk and would then return the men to their work spots.

Additions to rolling stock were made regularly. Not only modern steel coaches but also parlor cars and diners were purchased at intervals. The latter permitted inauguration on March 31, 1917, of the interurban's first "name train," the "Gold Coast Limited."

Upgrading of track structure was also effected. The light rail which had been characteristic of the line was gradually replaced with 100-pound rail more typical of the heavy steam railroads of the day. Only seven years after the Insull management took over, more than 60% of the main-line trackage had been rock-ballasted,



usually with at least 12 inches of crushed stone under the ties. One interesting experimental idea was trial of steel ties on a short stretch of line at Arden Shore. Although not successful enough to spread to other locations, 25 of these ties still remain in use.

Direct entrance to downtown Chicago had long been desired even by the old Chicago & Milwaukee Electric to increase the road's earning capacity. An obstacle to extension of service south from Evanston over the Chicago Milwaukee & St. Paul tracks—which were already electrified and used by the Northwestern Elevated—was a feeling that this route was not then well adapted to use by interurban trains. An engineering study by the H. M. Byllesby Company in 1912 suggested that a better permanent arrangement would have been prompt construction of new trackage directly south from Wilmette. Bypassing Evanston and avoiding use of the "St. Paul" tracks, this routing would have brought trains into Chicago via the Ravenswood Branch of the Northwestern "L." The engineers' report pointed out that such a connecting line could be built through the largely vacant land along the North Shore Channel. By constructing a section of railway here before the region was densely populated, C&ME could obtain property cheaply and then provide a local service to encourage

the already noticeable trend of residential construction in the area. But the litigation which surrounded the coming reorganization of C&ME prevented any new construction at that time and forestalled operation into Chicago for several years.

DIRECT SERVICE INTO CHICAGO BEGINS

Upon reorganization, the new North Shore Line management began negotiations to improve the Chicago entry. A temporary result came early in 1918 with operation of specially dispatched express "L" trains directly after the arrival of North Shore Line limited trains from the north. After receiving the transfer passengers from the interurban, the expresses made no stop between Davis Street, Evanston, and Randolph & Wells in the Chicago Loop.

On March 31, 1919, arrangements were made for trackage rights over this same "L" route. The North Shore Line and Northwestern "L" entered into new, separate agreements with the Chicago Milwaukee & St. Paul Railway for 25-year operating rights over the latter's line from Wilmette to Irving Park Boulevard in Chicago. In addition, an agreement between North Shore Line and the elevated system permitted use of "L" tracks by interurbans south from Irving



Park through the downtown "L" Loop to Roosevelt Road station on the near South Side.

North Shore leased a building at 209 S. Wabash Avenue for use as a passenger station. A passageway was constructed to the adjoining Adams & Wabash "L" platform. On August 6, 1919, trains began operation into Chicago. New stops at stations on the elevated lines included Howard Street, Wilson Avenue, Chicago Avenue, and Randolph & Wells (southbound), in addition to the Roosevelt Road terminal and the northbound stop at Adams & Wabash. The better-known station address at 223 S. Wabash came about in 1926 with a move of the station facilities into a different building, also adjacent to the platform at Adams & Wabash.

As part of the Chicago Rapid Transit Company's program of enlarging and modernizing principal "L" stations, the joint Uptown Station at Wilson Avenue was opened with appropriate ceremonies on December 12, 1923. A large lobby at street level, attractively finished with the marbled walls typical of the 1920's, provided room for the news stands and other service enterprises commonly appearing in railroad terminals as well as for North Shore Line and "L" ticket booths. In addition to the station proper, considerable amounts of rental

store space were made available along Broadway under the elevated tracks. Being located at the main corner of a business district that was just then developing as a prosperous and fashionable shopping center gave these facilities business from people other than rail passengers and thus helped to justify their existence.

A second extension over Chicago elevated tracks was made on February 15, 1922, and brought principal North Shore Line trains beyond the former Roosevelt Road terminal to 63rd & Dorchester station on the city's South Side "L." Trains thus tapped the then-prosperous Woodlawn district along 63rd Street, providing convenient service to Milwaukee for businessmen living or working on the southeast side. The spacious "L" coach yards at 61st Street and at 63rd & Calumet then became available for storage and servicing of North Shore Line equipment.


NEW MILWAUKEE TERMINAL IS ADDED

The original Milwaukee terminal facilities involved use of a wye and loading tracks in the street at 2nd & Grand (now Wisconsin Avenue) where a store building was used as a station. The rented station facilities here apparently moved from time to time. For example, in 1918 the space at 185 N. 2nd Street was obtained. Although this arrangement permitted service into the very heart of Milwaukee's business district, it necessitated train operation in congested streets and allowed only a minimum of station conveniences. Consequently, the railway began to assemble real estate for a new off-street station. Property along 6th Street between Sycamore (now Michigan) and Clybourn Streets was secured.

At the time of purchase, many thought the site to be too far west of the business district. The land was, in fact, also used for the interurban's first freight house in downtown Milwaukee and the location therefore seemed to have an industrial character. However, the city's commercial area was in a state of growth and it soon reached the terminal.

The new terminal was placed in service on September 14, 1920. From a spacious ticket office and waiting room passengers walked out into the train area on high-level platforms servicing the three passenger tracks. Protection from the weather was afforded by modern "butterfly" type platform canopies. With the baggage room and merchandise dispatch house on the premises, facilities for handling of parcels were likewise much improved over those at the former terminal location.

City cars did not enter the new terminal, but operated over the former interurban route to 2nd and Grand, where they continued to use the switchback in the street until city service was curtailed thirty years later.



Terminal of the branch from 1905 to 1926 is indicated in this view, looking north at the Rockefeller station about 1910. (HGF)



North Chicago Junction in 1912 had not yet become the pocket in an area of light industry that it is today. View above looks northwest into Milwaukee Division tracks, with the line to downtown Waukegan at the right and the tunnel under the Chicago & North Western Railway behind the camera. Semaphore to the right of the station is on a switch stand; the junction was never interlocked. (PS)

SMALLER STATIONS SEE IMPROVEMENTS

Not only the terminal cities but also smaller points where station facilities had been inadequate or traffic had shown an increase were favored with construction of new station buildings. The most elaborate was a spacious new brick structure built at Kenosha in 1922. Besides the main station building housing the ticket agency, waiting room, lunch counter, parcel lockers, and other conveniences, a secondary waiting room was built on the other side of the tracks to eliminate last-minute dashes to the proper platform as the train approached. Parking lots were provided, the grounds were carefully landscaped, and even the wooden transmission poles in the area were replaced with handsome concrete pillars.

The frame buildings at Highland Park, Ravinia, Winnetka (Elm Street), and Indian Hill were also replaced in this period with completely new structures. The Elm Street station was particularly unusual, as its architecture was of the

half-timbered style to harmonize with other buildings in the vicinity. Other points received smaller improvements as warranted by the traffic, as at Evanston where stucco additions to the old station building permitted increased floor area and gave the impression of a more attractive, substantial structure. Even rural local stops participated in the improvement program, with many deteriorating wooden platforms being relocated and replaced with platforms of cinders or gravel, topped with screenings in either case.

MORE DOUBLE TRACK IS ADDED

An elaborate program of the early 1920's involved elimination of the remaining single track on the Milwaukee Division. This job was completed except for a distance of about one-half mile between Oklahoma and Austin Avenues on the far south side of Milwaukee. This short stretch of single track, which remains even today, included the bridge over the Chicago Milwaukee & St. Paul Railway's main line. Al-

though concrete abutments had already been installed for a second track bridge at this location, the duplicate span was never added. A small amount of additional fill in the vicinity and a new bridge at Austin Avenue would also have been necessary to complete the double-tracking here.

The need for formal train-dispatching procedures governing the single track was lifted, however, upon installation of block signals.

Included in the newly double-tracked stretch were the overcrossings of the Chicago & North Western's Madison Division and its "St. Francis Cutoff" connecting line. Each of these locations required a new steel girder bridge with some additional fill to replace some of the line's long, high timber trestles.

A smaller tracklaying job at Milwaukee involved relocation of one block of city and inter-urban route. The entry had originally used 5th Street, a minor thoroughfare, from Harrison Street to Scott Street, since a route of The Milwaukee Electric Railway and Light Company al-

ready occupied the more important 6th Street. At Scott Street, the old C&ME line had made two right-angle turns to reach 6th Street for the remainder of the distance downtown. During 1925 tracks were laid on a right-of-way curving diagonally across the block just south of Scott to ease the sharp turns at this location.

Another improvement which affected the Milwaukee Division was preparation for a change from directly suspended trolley wire to a simple catenary overhead construction. Concrete foundations were placed for installation of Bates expanded steel poles which would have been joined above trolley height by similar expanded cross members to give a more rigid structure than that possible with span wires. Many of the new poles on the west side of the tracks were installed and even today carry the transmission line, and a few of the overhead crosspieces were put in place as samples. The project was not pursued to completion, however, because the even more rigid box trusses which were used on other new construction were regarded as superior.

1219961

On an embankment to the west of North Chicago Junction was the "West Line" cutoff (below) and Pettibone yard, used for making up freight trains. The North Chicago freight house is just discernible directly behind the two figures walking along the tracks. (PS)



Two cars meet just south of
"Merchants' Curve" at
Belvidere Street on the East
Line leading to downtown
Waukegan. (BN)



An early fleet of Waukegan city cars (at left) consisted of single-truckers #3, #1, and #2. While these were being photographed shortly after their delivery in 1898, the fourth car of the set was serving the North Chicago-Highland Park line. (RR)

The Electric Park city line led west on Washington Street from downtown Waukegan and crossed the Milwaukee Division (at right) at Edison Court passenger station, where the Waukegan freight house was also located. (ADD)

LIMITEDS AND MOTOR COACHES COME

With upgraded facilities all along the route, the company was in a position to offer improved services. Operation of named limited trains was expanded to include a larger number of trips, some nonstop between Evanston and Kenosha, with a distinctive name for each run. The number of deluxe cars—parlor-observation units and diners—constantly increased as newer equipment was added to the fleet.

Ever anxious to build up business, North Shore Line began the operation of motor coach routes reaching out to tap territory not directly contacted by its rail lines. The first route reached from Kenosha to Lake Geneva on August 12, 1922. A few other routes were added later, one of them being between Waukegan and Kenosha. In each case, schedules were closely coordinated with those of the rail service.

These rural motor coach routes came at a time when many were beginning to view rubber-tired vehicles as a modern and luxurious means of transportation, just a level above the commonplace of travel by railway coach or local trolley car. North Shore Line anticipated the coming attitude and carefully referred to its buses as "motor coaches," purchased the most luxurious vehicles then available, and established agencies and waiting rooms for the convenience of its highway passengers in off-railway towns.

The "vacationland" character of the lake area served by the motor coach routes is indicated by the fact that members of convention groups traveling to Chicago were offered sidetrips to the lakes. Besides building up the motor coach business, this promotional device undoubtedly helped in securing some Milwaukee-to-Chicago passengers who would otherwise have used the steam railroads.



PUBLICITY KEEPS PACE WITH SERVICE

Inaugurating improved services is only a first step, though, and North Shore Line promptly went about the task of keeping its name before the public. Car cards were posted in the local transit vehicles of both Chicago and Milwaukee. Large signs were painted on billboards, overhead bridge girders, and other carefully selected locations along automobile roads to sell the advantages of going "North Shore" next time.

A number of well-known Chicago artists were retained to design colored posters copying those successfully used by the London "Underground" subway system. Depicting country scenes along the route or services offered by the line, they attracted widespread favorable comment and made their contribution to increasing the number of riders and making the railway a profitable enterprise.

Newspaper advertising space was taken regularly, using both the daily papers of the cities and the weeklies of the smaller communities. The eighteen foreign-language papers in the two terminal cities also carried North Shore Line advertising. In addition, the management secured frequent mention in news columns of the press by inviting reporters to "cover" each improvement or extension of service.

The booming moving-picture industry of the early 1920's was also used by the railway in its publicity campaign. One film made up by the road, "The Green Bay Trail," was a story of the travel routes between Chicago and points in the north shore district. It was accepted for showing in the commercial movie theaters, as the subtlety of its advertising message classified it as an educational film. Another film, called "The Pace of Progress," depicted the development of merchandise handling through recent history with



The importance of local business is suggested by the magnitude of facilities at some smaller stops, like Grand Avenue, Waukegan (at left). (GK)



Sketch adapted from an old glass slide shows combination baggage car #18 making a pioneer trip over the Milwaukee Division about 1906. (GK)

emphasis on the railway's Merchandise Dispatch service.

As part of its program to create what would today be called a "new image," the North Shore Line management instituted a monthly magazine for its riders and the general public. Known as the North Shore Bulletin, it first appeared in "take-one" boxes in cars and stations in November 1917. It was immediately accepted by the public, with a mailing list of people outside of North Shore Line territory soon being developed and growing into many thousands.

In 4-by-7-inch format and averaging about 30 pages per issue, the Bulletin soon developed a style which remained constant throughout its life. The front pages were taken up with Editor Luke Grant's musings on anything from the fate of the German Kaiser to the perverseness of the village officials of Wilmette or the excellence of North Shore Line's newest equipment. Lead articles described historical or scenic spots reached by the North Shore Line or announced the road's latest service improvement.

During the years many industries in the territory were described--and their managements were quick to see in the Bulletin a means of publicity for themselves. They frequently took extra copies and thus helped to publicize North Shore Line at the same time.

Almost every issue included letters received from riders commending the service. Employee morale was boosted when letters praising those courteous extras were printed along with the names and often photographs of employees who went beyond the line of duty to please the public.

The seemingly serious tone of the magazine was relieved by a generous supply of jokes. And regular correspondents kept the Bulletin apprised of their goings and comings—one, signing himself "Loophound," was almost a featured columnist. Special parties using North Shore Line service were regularly noted in the pages of the Bulletin.

INDUSTRY-WIDE RECOGNITION IS WON

In October, 1923, North Shore Line had the distinction of winning the first annual Charles A. Coffin Gold Medal and Prize, which were provided by the General Electric Company for the electric railroad within the United States which during the year had done the most to popularize electric railway services.

Two complete demonstration spans of Bates poles and cross members were set up in the 1920's at Greenwood Avenue, Waukegan (below). Improved type of steel tower catenary suspension today extends north to this same point.



Northbound car
#133 pauses at
Kenosha on a
local trip. (BN)



The American Electric Railway Association committee which examined the claims of the competing companies reported:

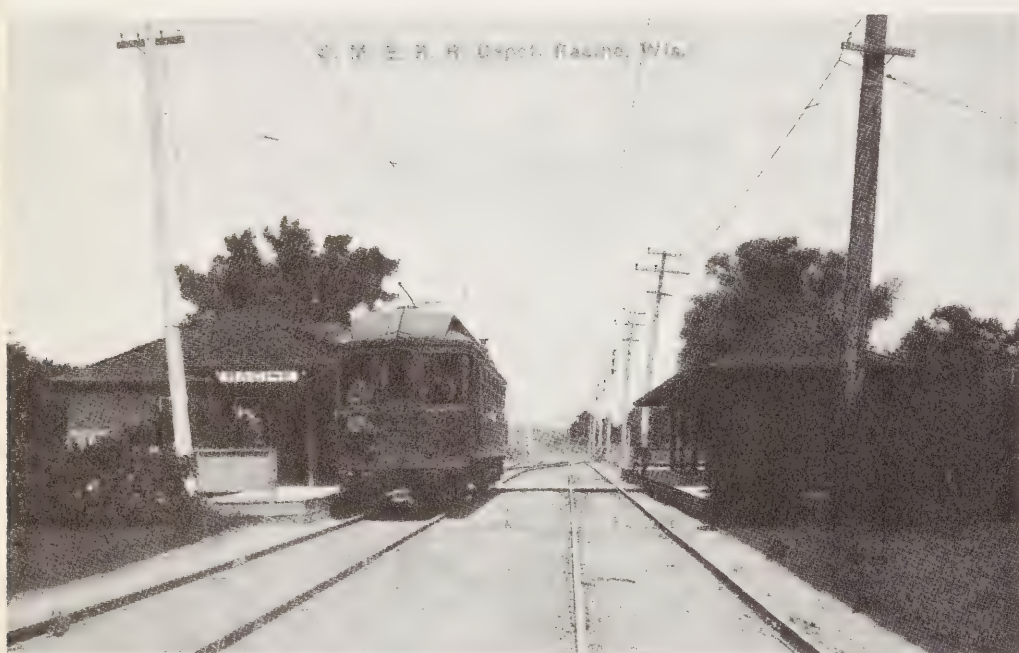
From the representations of the winning company [North Shore Line] the committee finds that on this property there has been carried to a fruition most of the things that have been talked about for years as remedies for various troubles.

On this property the remedies have not only been talked about; they have been executed. Thus the winner stands out as a railway that has largely accomplished the task of gaining public good will, of merchandising transportation; modernizing service and equipment and improving its financial structure.

(Continued on page 41)

A connecting line (and one-time subsidiary) was the Kenosha Electric Railway, represented by a view of car #14 and an interurban of The Milwaukee Electric Railway & Light Company at the north limits of Kenosha. Elizabeth Street cars shuttled between this point and the Chicago & Milwaukee Electric station. At the time, TMER&L terminated at the edge of town. (CSS)





A view of Racine substation in 1919 indicates the little-developed area then traversed by North Shore Line. Asylum Road (above) later became Taylor Avenue.

Southbound combination baggage car in passenger service at Racine station dates view at left to 1917 or before. (BN)

One of North Shore Line's progressive research projects was trial of barrier-type crossing protection, shown at Middle Road with a "telltale"-like warning signal in advance of the steel-cable barrier.



PURCHASE OF A CONNECTING LINE FAILS

All in all, North Shore Line had built a run-down interurban of 1916 into the speedy, efficient, and prosperous railroad of the mid-1920's. A comparison of revenue statistics alone gives an eloquent notion of the changes that had been brought about by maximum development of the road.

Revenue Statistics

Year	Revenue per Mile of Road
1916.....	\$12,688
1917.....	19,203
1918.....	31,798
1919.....	33,278
1920.....	40,558
1921.....	43,528
1922.....	48,472
1923.....	57,498
1924.....	59,962

Wasn't a road that had shown such an optimistic trend in sharp opposition to the financial performance of most contemporary interurbans in the position to reach out and, with growth, to become well-known on an even greater scale than before? The Insull management certainly thought so. With dreams of establishing a "super-



The Root River viaduct (above) replaced a single-track timber trestle that had extended not only the distance shown here, but also for some distance behind each permanent abutment. (GK)

Freshly ballasted in 1908 was the brand-new line at Ryan Tower. Gable roof of the Carrollville substation can be seen through the pole line in the distance. Note whitewashed poles to alert motormen approaching the railroad intersection. (GK)





The rolling character of the landscape over the ten miles south of Milwaukee meant that overpasses and underpasses dominated the scene there. The original structures were wooden trestles, money having run short as the railway reached the area. In the '20's, several of these spans were replaced.

A steel main span installed in 1923 (at left) provided for vehicle traffic on College Avenue.

Note local train platforms, with shelter on northbound side indicating that most of the riders from this stop traveled toward Milwaukee.

interurban" between Chicago and St. Paul-Minneapolis, Insull would have made the North Shore Line a basic link. By 1922 the Wisconsin Power & Light Company interurban line, extending west from Sheboygan to Elkhart Lake, as well as the North Shore Line and various Chicago area roads, was a member of the Insull group. The Milwaukee Northern Railway, connecting link between Milwaukee and Sheboygan, had remained independent of both Insull and the North American Company, owners of The Milwaukee Electric Railway & Light Company. Under the pressure of post-World War I inflation, however, MN was in financial difficulty. North American, Insull interests, and the Wisconsin Public Service Corporation all bid to acquire MN. North American's bid of \$6 million was successful; the Insull group was frozen out as MN was integrated into the system of TMER&L. Despite the diverse ownership, however, North Shore Line and the route to Sheboygan continued for a number of years to have certain close operating ties.

A NEW ROUTE IS DESIRED

By the early 1920's, the communities along the line from Evanston to Glencoe were closely built up, especially in their central areas which were traversed at street level by the tracks of North Shore Line and of the Chicago & North

Western Railway. It was inevitable that grade separation would eventually have to be undertaken, and any such project would have interrupted service during construction. Consequently the company looked for another route to protect its Chicago-Milwaukee passenger traffic.

The name Skokie which was to become synonymous with North Shore Line speed here enters the story. As one writer describes it:

Paralleling the Evanston region is a north and south valley known as the Skokie. It is a wildish desolate district, with marsh and stream and pictorial trees. Artists paint pictures of the Skokie. Young poets write poems about the Skokie. Plainer citizens tramp along the Skokie. Golfers play beside the Skokie. And everyone wants to keep it untouched by modernity. So again one notices the possibilities of sentiment in this practical city [Chicago]. For capitalists have freely given their names in promise to join in plans of preservation, and the city itself is actually preserving considerable part of the region and will probably get more.

Well, perhaps it wasn't quite as romantic as that, for the C & NW had noticed its own problems of hauling freight in the Lake Bluff-Wilmette area and built a freight bypass through the valley in 1903.

The undeveloped state of the Skokie valley provided an opportunity for North Shore Line to build a route suitable for high-speed service. At the same time, the Public Service Company of Northern Illinois needed right-of-way for a heavy transmission line to Chicago from its new generating station on the lakefront just north of Waukegan. The two companies, both members of the Insull empire, acquired a joint right-of-way in the Skokie valley. For its part, the North Shore Line organized a subsidiary, the Chicago North Shore & Northern Railroad, to acquire right-of-way and undertake construction. By 1923 all necessary real estate had been assembled.

The transmission route extended from the Chicago city limits at Devon Avenue along the C&NW's Skokie line, crossing the Lake Bluff-Mundelein Branch at South Upton, passing west of Waukegan, and continuing north and east to intersect the Milwaukee Division of the North Shore Line and then enter the generating station.

When the land was purchased, the route of the railway had not yet been definitely determined except, of course, that it would continue along the transmission right-of-way for most of the distance.

It was finally decided that the south end of the new railroad route should diverge from the existing line at the Howard Street "L" station at Chicago's city limits and run west just north of Howard Street to connect with the power company's right-of-way near Oakton and Cicero Avenues.

During 1924, North Shore Line offered stock to the general public and to employees as well. At the same time, \$3.5 million in one-year notes and \$7 million in 6% gold bonds were issued to provide the principal financing for the project. Meanwhile ordinances permitting construction were sought from the appropriate governmental bodies. The last ordinance was passed by the city of Evanston on April 2, 1924, and accepted

A new bridge over the Chicago & North Western Railway's St. Francis cutoff permitted installation of some additional double track. Long building behind the smokestack of C&NW's power plant is the Harrison Street carbarn.





A general view looking northeast over Harrison Street yard in the late 1920's is dominated by the main line, double-tracked in 1924, separating the freight yard from the substation, car barn, coach yards, and storehouses at the right.

by the company on April 3. On the next morning work was commenced by the L. E. Myers Company, general contractors on one of the last interurban construction projects in the United States.

It is interesting to note that this technique of constructing a new section of railway to bypass built-up areas where operation was slow became practically a trademark of Insull interurban managements. Land was, in fact, also purchased for a bypass of one particularly difficult piece of street running in Wilmette. The idea was copied in dreams of bypassing communities on the Chicago Aurora & Elgin Railroad Company's main line to permit a faster Chicago-Aurora service—though this plan never succeeded, only a few miles of rather useless track being the result.* On the Chicago South Shore & South Bend Railroad, it was hoped to bypass street-running in the intermediate cities of East Chicago and Michigan City, and complete rights-of-way around both were actually purchased. The East Chicago relocation was finally effected in 1956 with the cooperation of the Indiana Toll Road Commission; no change at Michigan City was ever accomplished.

*See CERA Bulletin 105, "The Great Third Rail."

THE COMPLEX FIRST PORTION IS BUILT

Two miles of double-track railroad with all crossings grade separated was built through the city of Evanston. Leaving Howard Street, the line descended sharply into a cut for about a mile. Four vehicular bridges were constructed to carry street traffic over the railroad, the one at Ridge Avenue being built in 58 days.

It had been hoped originally that the route could be constructed under Chicago Avenue and the Chicago & North Western Railway and then return to the surface. The city of Evanston required that some streets be kept open which would have had to be closed under this plan. It was therefore necessary to continue in the cut with streets bridging over the railroad. To avoid dropping the cut below the level of Lake Michigan, the grade of Custer Street, whose elevation was only about twenty feet above the lake, had to be raised.

For economy and freedom from maintenance, concrete was used where possible. Bridges, station platforms, cribbing walls, and even drainage pipes were constructed of either concrete or concrete-covered steel.

(Continued on page 46)



Spare cars on a lazy afternoon, #501 and interurban coach #133 doze outside the carbarn about 1912. (PS)

"Progress double tracking" at Harrison Street in 1923 (below) meant realigning special track work on the lead into the carbarn. The 500 type city cars shown in the center background had been supplanted by Birneys only a few months earlier.





Crossing with a city line of The Milwaukee Electric Railway & Light Company at Grove (5th) and Greenfield was complicated on one occasion by temporary single track on both railways around special work which was being replaced. Westbound TM car on the Burnham route rolled gingerly over temporary trackwork (above).

The cut was adjacent to the Commonwealth Edison Company's Calvary substation supplying power to the "L" system and to North Shore Line as its tenant as well as to the Chicago and Evanston streetcar lines in the vicinity. It was necessary to carry down the foundations of this building about nineteen feet to retain a firm footing despite the changed pattern of earthwork nearby. Also at this location, a temporary diversion of the Evanston Railways car line was made to avoid interrupting its service. At numerous points the telephone, gas, and water lines which were in the way of the cut had to be rerouted—a job that is not necessary when constructing a more conventional railroad at grade or through rural land.

A complete drainage system was necessary in the cut through Evanston, as the soil is lake sand containing a large amount of water and because the entire cut is below the level of the Evanston sewer system. Water is pumped out of the cut at Custer Street and carried over a mile to the North Shore Channel for discharge.

Between Asbury and Dodge Avenues an ascent was made to cross above the remaining streets of Evanston and the North Shore Channel. At some points the line rose 40 feet above the natural ground surface. Two-thirds of the necessary earth for the embankment was obtained from the cut through Evanston, while the remainder came from the surplus fill that had been left when the North Shore Channel was excavated.

The land on each side of the canal was soft and swampy, too weak to support the weight of the railway embankment. On the west side of the canal, the ground rose as much as five feet at places 50 to 100 feet from the railroad due to the weight of the fill and consequent shifting of the ground. The total settlement in the embankment here was about twelve feet. Most of this loss in elevation was remedied under regular train traffic after operation began.

Similar problems caused by changing loads on unstable earth had been encountered just east of the North Shore Channel. The outflow sewer for

the Evanston cut had been constructed about twenty feet underground. One morning, about 500 feet of this sewer had suddenly appeared on the surface, squeezed out by the pressure of the semi-fluid soil.

Beyond the canal crossing, the railway continued about 2 1/2 miles at ground level to Dempster Street, the terminal of the first portion to be completed. This ground-level portion was equipped with catenary overhead suspended from steel towers; a changeover point from third rail was established at East Prairie Road, the first grade crossing.

The 4.9-mile Howard-Dempster portion extended almost entirely through undeveloped prairie and farmland. Even within Evanston, the area was sparsely populated and began to build up only after the beginning of train service. West and north from the North Shore Channel bridge, the region was incorporated as Niles Center and

promptly subdivided into house lots. As with other suburbs of the time and even with some tracts in Chicago, however, the depression struck before much residential construction had been begun. Most of Niles Center lay empty, with only an occasional house or a few three-flat buildings huddled together against the prairie wind. Only in the automobile economy of the mid-1950's, long after the name of the municipality had been changed to Skokie, did a construction boom reach the area. Today, practically every block is filled with attractive, neatly landscaped brick homes or brand-new apartment rows grouped around a private parking area. Only rarely does one come upon a row of old-fashioned street lamps standing in front of a vacant tract with tall grass waving in the breeze as a silent reminder of the real-estate boom that might have occurred as soon as railway service began.

A glimpse north into the passenger tracks of the new Milwaukee Terminal in 1920 gives an idea of the track and platform arrangement. The city line and former interurban route led downhill behind the camera, passing the merchandise dispatch tracks (at right). (GK)



At inaugural of the Milwaukee Terminal, construction work on one wing was still underway. In this view, looking southeast, tracks on 6th and on Sycamore (Michigan) Streets (at left) are those of The Milwaukee Electric.



A small freight house with track space for four or five cars was sufficient in Milwaukee when merchandise dispatch service began, but facilities soon had to be enlarged. About 1918 (at left), Clybourn Street main line in foreground still carried interurbans and city cars to and from the old 2nd & Grand terminal. (GK)

CHICAGO RAPID TRANSIT SERVICE BEGINS

By agreement with the Chicago Rapid Transit Company, operator of the "L" system, local service over the Howard-Dempster line was operated beginning March 28, 1925, with "L" cars using the North Shore Line-owned track-
age on a cost division basis. Eight small passenger stations with high-level platforms were constructed, generally at half-mile intervals; the three stations in Evanston contained rental space intended for use by grocery stores or other small enterprises.

Local passenger traffic was expected to build up to the point where a third and a fourth track would be required to avoid delay to Chicago-Milwaukee interurban limiteds. Consequently, all concrete work allowed space for the two additional tracks, although considerable amounts of cut and fill work would still have been necessary before the express tracks could have been added. The existing tracks would have become the two center tracks. Actually, local traffic never reached profitable levels; a few trains of one or two old elevated cars shuttling between Howard and Dempster were the normal service on the route. This operation was discontinued effective March 27, 1948, in favor of a bus line which could contact more directly the centers of

commercial and industrial activity as they had actually developed.

A longer-lasting benefit of the Skokie extension to the "L" system was establishment of general shops on a 40-acre tract adjacent to the line near East Prairie Road. These shops were gradually made the main overhaul location for the entire Rapid Transit system, relieving the less spacious facilities on each "L" branch in the city of all but routine inspection work. During the early years, considerable work was done on North Shore Line cars as well; and today a parts warehouse and a storage yard for surplus "L"-subway cars have been added to the "Skokie Shops" layout.

This first Howard-Dempster portion of the Skokie bypass route was hardly completed before construction on the remainder of the line was begun. It had been thought that this might extend from Dempster Street around North Chicago and Waukegan to connect with the Milwaukee Division just north of Waukegan.

However, it was found that the line could be completed at reasonable expense by tying it into the Libertyville Branch at South Upton and then using the West Line right-of-way to North Chicago. The line was pushed through and was completed by mid-1926, a construction feat that permitted the beginning of a new era in North Shore Line operations.

The second half of the North Shore Line history, covering the period from about 1926 to the present time, will be the topic of CERA Bulletin 107, the 1963 yearbook.



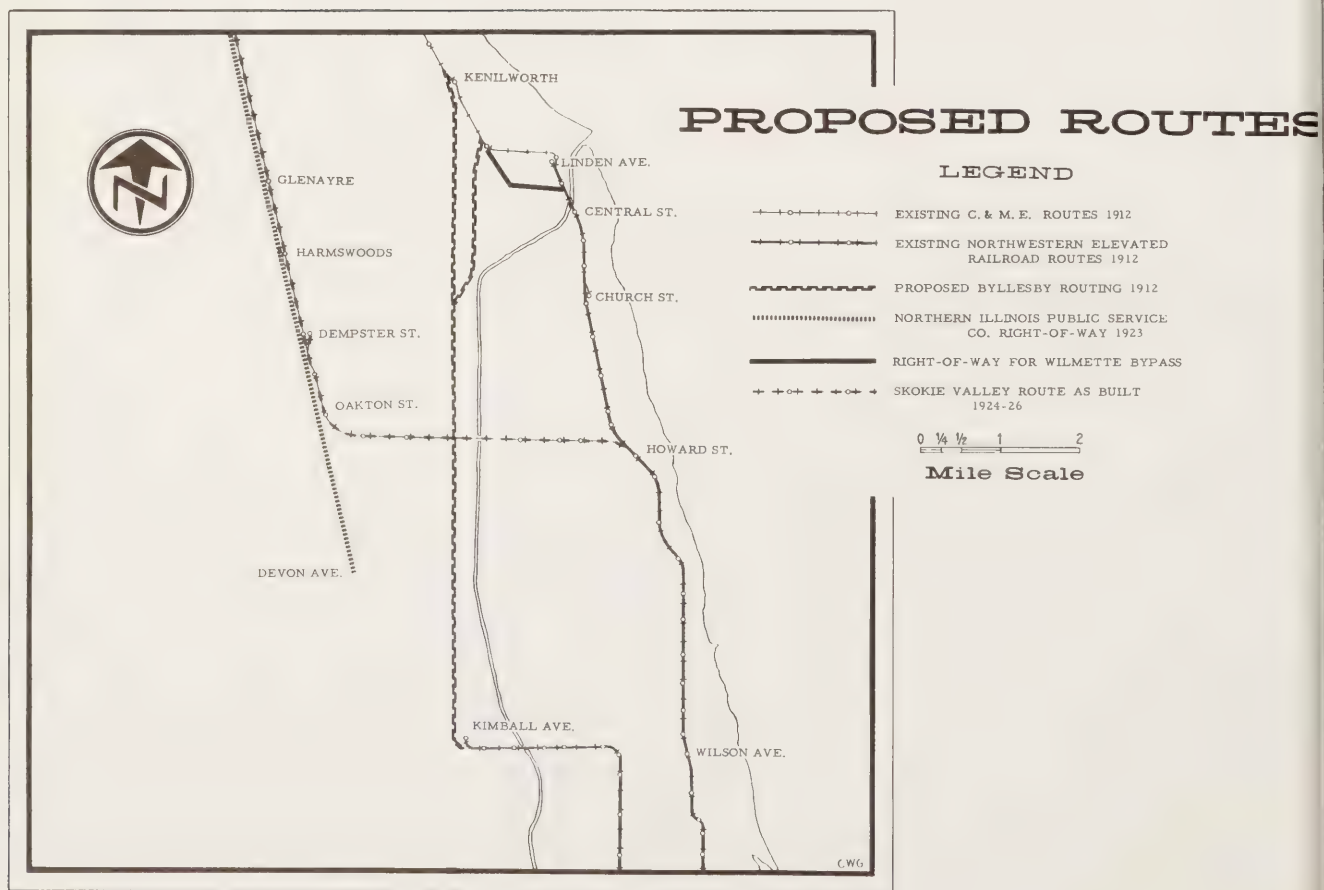
Parlor-buffet car #403 and coach #302, comprising a Limited train for Chicago, face north before starting a trip. The route from 2nd & Grand terminal (above) took them north on 2nd Street and west on Wells before they turned south for the first time. (GK)

Construction on the Howard-Dempster portion of the Skokie Valley line in 1924-25 went on despite the problems posed by winter weather. Looking northwest into freshly graded right-of-way at Howard Junction while an Evanston-Chicago express "L" train bears down on the photographer, this view suggests construction methods that were up-to-date not only then but would be familiar even today. (ADD)



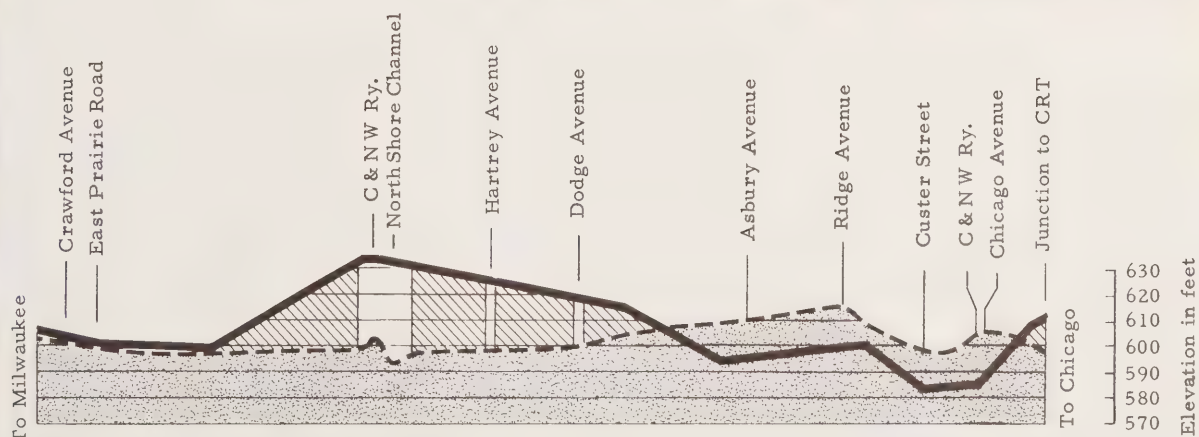


A panoramic view of the long North Shore Channel bridge on the official inaugural day shows that the finishing touches were just then being added. Structure spans, from left to right, Evanston-Mayfair line of Chicago & North Western Railway, site of McCormick Boulevard, the North Shore Channel, and McDaniel Avenue. Buildings of construction camp (in background) were soon to be moved farther north for construction of the route beyond Dempster Street. Note unusual "box abutment" construction which was the practice on this line. (ADD)





The official start of Chicago Rapid Transit service to Dempster Street, Niles Center, was "an event" for that previously semi-isolated community. Population of Niles Center jumped more than sixfold in the 1920-1930 decade. The high-speed Skokie Valley interurban tracks came to occupy the space at the right. (GK)



Skokie Valley Route Grade Separation

Pre-existing ground level Rail level Fill

Mile Scale

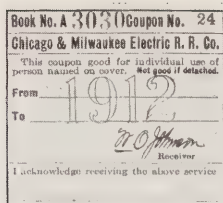


RGB

Local franchises on the south end of the line often specified 5¢ commutation rates for distan-

1910

By 1910, limited trains and parlor-buffet cars had made their entrance. Through service was already being emphasized in an early attempt to attract the longer-distance, higher-paying passenger. (GK)



Coupon from an individual commutation book antedates establishment of a uniform system of multiple-ride tickets. (JMC)

ces of more than one nickel fare zone. Twenty-coupon books were sold for \$1, for example, between Evanston and Winnetka and between Evanston and Highland Park.

When service into Milwaukee was first begun in 1908, all cars ran as locals making the frequent country flag stops along the Waukegan-Milwaukee route. Since these same trains were also providing local service on the older portion of the road through the towns south of Waukegan, through riding between Evanston and Milwaukee was far from attractive. The 73-mile trip between terminals was originally scheduled at an average speed of only about 27 miles per hour.

THE FIRST LIMITEDS ARE INSTITUTED

It was almost immediately seen that improved services would have to be provided if the Milwaukee Division were to become more than a convenience for local farmers. As is evidenced by a glance at the chapter on rolling stock, the new passenger cars of the period had gradually made the transition from the short, angular car of street railway style to the longer designs that came to be typical of wooden interurban cars throughout the Midwest. A concurrent transition involved the use of more powerful motors geared for higher speeds, so that some improvement in travel times could be realized by freeing the trains from the slow drag through flag stops prepared to halt if a short-distance local passenger or two wanted to board. Thus came introduction of a few limited trains by 1910. Operating initially on an interval of three hours, these trains reduced running time between terminals by about 22% for an average speed of 32 miles per hour.

These limiteds were normally operated with more luxuriously appointed cars than the 117-141 intended for Evanston-Waukegan service. Two-car operation was apparently the rule, with some trains using 200-class combination coach-baggage units. Straight coaches in the 300 class were more common, however, and each limited train included an arch-windowed hallmark of interurban luxury in the form of a 400-series parlor-buffet car.

In 1915 the railway once more felt in need of shorter running times to aid in competition with the Chicago & North Western. This time the attempt at improvement was made by purchase of steel cars 150 to 164, reported in the trade press

to have nearly twice the power of the previous equipment. Operation of these cars was hoped to save 24 minutes over the length of the run.

The few daily limiteds grew into a pattern of fast hourly service, generally leaving the principal terminal on the hour throughout the day. Meanwhile the frequency of Milwaukee Division local service began to decrease accordingly. No improvement in speeds of the remaining Evanston-Milwaukee local trains came about; through running time remained at about the three-hour mark. Passing of locals by limiteds at intermediate sidings came to be a regularly scheduled operation—one that must have called for its share of caution in those early days of fast running when kerosene tail lamps and line unprotected by block signals were invariably used.

THE "GOLD COAST" BEGINS SERVICE

March 31, 1917, saw introduction of train names more striking than the purely descriptive "Milwaukee Limited" and "Chicago Limited" which had previously served. At this time, North Shore Line inaugurated the "Gold Coast Limited" on a few daily trips between Evanston and Milwaukee. This train marked the beginning of dining car operation serving full meals, an attraction which remained until 1949. Initially, diner trains left Evanston at 12:15 and 6:00 PM, with others departing from Milwaukee at 1:35 and 7:35 PM. The railway proudly announced that a dining car chef from the Santa Fe system and a crew of experienced railroad waiters had been hired. The steward responsible for keeping the accounts was a man from the North Shore Line's regular conductors' board.

The steel dining cars used in "Gold Coast" service, numbers 404 to 406, were arranged with removable tables to permit their use as parlor cars on trips other than at mealtimes. The same man who had served as steward became parlor car conductor and collected a 25¢ seat charge. Train conductors working the coaches handled the regular fares separately.

The newly improved luxury services gave the management impetus to consider establishing sleeping-car service in addition. Departures from each terminal would have been made about 10 PM. Nothing came of this idea, however; if it had been established, it certainly would have been an unusually short sleeper route.

(Continued on page 57)

EVANSTON TO WAUKEGAN
NORTH BOUND TRAINS READ DOWN

STATIONS	FIRST CLASS							
	24	187	189	191	193	27	197	199
	Local	Local	Local	Local	Local	Local	Local	Local
24.00 Evanston	5.45	5.45	5.45	5.45	5.45	5.45	5.45	5.45
1.00 Central St.	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50
1.27 Linden	5.55	5.55	5.55	5.55	5.55	5.55	5.55	5.55
2.00 Winnetka	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
4.00 Sunset	6.05	6.05	6.05	6.05	6.05	6.05	6.05	6.05
5.24 Winnetka	6.10	6.10	6.10	6.10	6.10	6.10	6.10	6.10
7.00 South Ave	6.15	6.15	6.15	6.15	6.15	6.15	6.15	6.15
8.42 Ravinia Park (10)	6.20	6.20	6.20	6.20	6.20	6.20	6.20	6.20
11.14 Lincoln	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25
12.51 Woodland	6.30	6.30	6.30	6.30	6.30	6.30	6.30	6.30
13.51 Highland Pk.	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35
14.45 Sheridan	6.40	6.40	6.40	6.40	6.40	6.40	6.40	6.40
14.55 Farwell	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45
17.26 Rose	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
17.50 Kennedy	6.55	6.55	6.55	6.55	6.55	6.55	6.55	6.55
18.31 Lake Bluff Jct. (24)	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
20.06 Howard St.	7.05	7.05	7.05	7.05	7.05	7.05	7.05	7.05
21.25 No. Chicago Jct.	7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10
21.60 Barnes	7.15	7.15	7.15	7.15	7.15	7.15	7.15	7.15
22.91 Washburn	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20
24.30 Waukegan	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25

WAUKEGAN TO EVANSTON
SOUTH BOUND TRAINS READ UP

STATIONS	FIRST CLASS							
	200	636	303	304	305	306	307	308
	Local	Local	Local	Local	Local	Local	Local	Local
24.00 Evanston	5.45	5.45	5.45	5.45	5.45	5.45	5.45	5.45
1.00 Central St. (2)	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50
2.00 Linden	5.55	5.55	5.55	5.55	5.55	5.55	5.55	5.55
2.44 Winnetka	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
4.00 Sunset	6.05	6.05	6.05	6.05	6.05	6.05	6.05	6.05
5.24 Winnetka	6.10	6.10	6.10	6.10	6.10	6.10	6.10	6.10
7.00 South Ave	6.15	6.15	6.15	6.15	6.15	6.15	6.15	6.15
8.42 Ravinia Park (10)	6.20	6.20	6.20	6.20	6.20	6.20	6.20	6.20
11.14 Lincoln	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25
12.51 Woodland	6.30	6.30	6.30	6.30	6.30	6.30	6.30	6.30
13.51 Highland Pk.	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35
14.45 Sheridan	6.40	6.40	6.40	6.40	6.40	6.40	6.40	6.40
14.55 Farwell	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45
17.26 Rose	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
17.50 Kennedy	6.55	6.55	6.55	6.55	6.55	6.55	6.55	6.55
18.31 Lake Bluff Jct. (24)	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
20.06 Howard St.	7.05	7.05	7.05	7.05	7.05	7.05	7.05	7.05
21.25 No. Chicago Jct.	7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10
21.60 Barnes	7.15	7.15	7.15	7.15	7.15	7.15	7.15	7.15
22.91 Washburn	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20
24.30 Waukegan	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25

From one of Chicago & Milwaukee's last timecards, these pages suggest the problems of fitting in local services while maintaining frequent limited schedules. (GK)

LIBERTYVILLE BRANCH
WEST BOUND TRAINS READ DOWN

STATIONS	FIRST CLASS							
	301	302	303	304	305	306	307	308
	Local	Local	Local	Local	Local	Local	Local	Local
18.31 Lake Bluff Jct. (24)	5.52	5.52	5.52	5.52	5.52	5.52	5.52	5.52
19.00 Green Bay Jct. (101)	5.54	5.54	5.54	5.54	5.54	5.54	5.54	5.54
20.04 Mendota (103)	5.57	5.57	5.57	5.57	5.57	5.57	5.57	5.57
23.38 Grand Pk. (107)	6.03	6.03	6.03	6.03	6.03	6.03	6.03	6.03
24.06 Libertyville	6.05	6.05	6.05	6.05	6.05	6.05	6.05	6.05
24.77 End Div. Trk. (110)	6.07	6.07	6.07	6.07	6.07	6.07	6.07	6.07
25.91 Area	6.12	6.12	6.12	6.12	6.12	6.12	6.12	6.12

LIBERTYVILLE BRANCH
EAST BOUND TRAINS READ UP

STATIONS	FIRST CLASS							
	302	304	306	310	312	314	316	318
	Local	Local	Local	Local	Local	Local	Local	Local
8.00 Lake Bluff Jct. (24)	6.55	6.55	6.55	6.55	6.55	6.55	6.55	6.55
7.50 Green Bay Jct. (101)	6.53	6.53	6.53	6.53	6.53	6.53	6.53	6.53
6.37 Mendota (103)	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
5.53 Grand Pk. (107)	6.24	6.24	6.24	6.24	6.24	6.24	6.24	6.24
5.03 Libertyville	6.22	6.22	6.22	6.22	6.22	6.22	6.22	6.22
2.14 End Div. Trk. (110)	6.20	6.20	6.20	6.20	6.20	6.20	6.20	6.20
0.00 Area	6.15	6.15	6.15	6.15	6.15	6.15	6.15	6.15

NORTH CHICAGO JCT. TO MILWAUKEE
NORTH BOUND TRAINS—READ DOWN

STATIONS	FIRST CLASS															
	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76
	Local	Local	Local	Local	Local	Local	Local	Local	Local	Local	Local	Local	Local	Local	Local	Local
21.25 No. Chicago Jct. (28)	5.55	5.55	5.55	5.55	5.55	5.55	5.55	5.55	5.55	5.55	5.55	5.55	5.55	5.55	5.55	5.55
21.45 Valley Jct. (31)	5.58	5.58	5.58	5.58	5.58	5.58	5.58	5.58	5.58	5.58	5.58	5.58	5.58	5.58	5.58	5.58
22.41 Valley Jct. (33)	5.58	5.58	5.58	5.58	5.58	5.58	5.58	5.58	5.58	5.58	5.58	5.58	5.58	5.58	5.58	5.58
23.54 Edison St. (37)	5.41	5.41	5.41	5.41	5.41	5.41	5.41	5.41	5.41	5.41	5.41	5.41	5.41	5.41	5.41	5.41
27.07 Golf (39)	5.45	5.45	5.45	5.45	5.45	5.45	5.45	5.45	5.45	5.45	5.45	5.45	5.45	5.45	5.45	5.45
30.45 Elmhurst City (41)	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50
30.55 McHenry (47)	5.54	5.54	5.54	5.54	5.54	5.54	5.54	5.54	5.54	5.54	5.54	5.54	5.54	5.54	5.54	5.54
30.18 Kenosha (49)	6.01	6.01	6.01	6.01	6.01	6.01	6.01	6.01	6.01	6.01	6.01	6.01	6.01	6.01	6.01	6.01
30.51 Kenosha Tower	6.03	6.03	6.03	6.03	6.03	6.03	6.03	6.03	6.03	6.03	6.03	6.03	6.03	6.03	6.03	6.03
42.54 Birch	6.09	6.09	6.09	6.09	6.09	6.09	6.09	6.09	6.09	6.09	6.09	6.09	6.09	6.09	6.09	6.09
45.87 Beebe	6.10	6.10	6.10	6.10	6.10	6.10	6.10	6.10	6.10	6.10	6.10	6.10	6.10	6.10	6.10	6.10
45.54 Racine Tower	6.12	6.12	6.12	6.12	6.12	6.12	6.12	6.12	6.12	6.12	6.12	6.12	6.12	6.12	6.12	6.12
49.12 Racine	6.18	6.18	6.18	6.18	6.18	6.18	6.18	6.18	6.18	6.18	6.18	6.18	6.18	6.18	6.18	6.18
51.21 Quarry	6.23	6.23	6.23	6.23	6.23	6.23	6.23	6.23	6.23	6.23	6.23	6.23	6.23	6.23	6.23	6.23
53.43 Root River So. (67)	6.26	6.26	6.26	6.26	6.26	6.26	6.26	6.26	6.26	6.26	6.26	6.26	6.26	6.26	6.26	6.26
53.72 Root River No. (69)	6.29	6.29	6.29	6.29	6.29	6.29	6.29	6.29	6.29	6.29	6.29	6.29	6.29	6.29	6.29	6.29
55.33 Fire Mills	6.32	6.32	6.32	6.32	6.32	6.32	6.32	6.32	6.32	6.32	6.32	6.32	6.32	6.32	6.32	6.32
60.30 Northwestern (71)	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35
61.07 Kenosha (73)	6.38	6.38	6.38	6.38	6.38	6.38	6.38	6.38	6.38	6.38	6.38	6.38	6.38	6.38	6.38	6.38
62.71 Racine (75)	6.41	6.41	6.41	6.41	6.41	6.41	6.41	6.41	6.41	6.41	6.41	6.41	6.41	6.41	6.41	6.41
65.90 Grand (77)	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45
67.93 Howard (79)	6.48	6.48	6.48	6.48	6.48	6.48	6.48	6.48	6.48	6.48	6.48	6.48	6.48	6.48	6.48	6.48
69.39 Harrison (81)	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
71.34 National Ave.	6.52	6.52	6.52	6.52	6.52	6.52	6.52	6.52	6.52	6.52	6.52	6.52	6.52	6.52	6.52	6.52
72.74 Milwaukee	6.54	6.54	6.54	6.54	6.54	6.54	6.54	6.54	6.54	6.54	6.54	6.54	6.54	6.54	6.54	6.54

MILWAUKEE TO NORTH CHICAGO JCT.
SOUTH BOUND TRAINS—READ UP

Station Mileage	FIRST CLASS										FIRST CLASS																					
	Special Classes										Special Classes																					
	1		62		63		64		65		66		67		68		69		70		71		72		73		74		75		76	
	Local	Local	Local	Local	Local	Local	Local	Local	Local	Local	Local	Local	Local	Local	Local	Local	Local	Local	Local	Local	Local	Local	Local	Local	Local	Local	Local	Local	Local	Local	Local	
Only Way Express	Only Way Express	Only Way Express	Only Way Express	Only Way Express	Only Way Express	Only Way Express	Only Way Express	Only Way Express	Only Way Express	Only Way Express	Only Way Express	Only Way Express	Only Way Express	Only Way Express	Only Way Express	Only Way Express	Only Way Express	Only Way Express	Only Way Express	Only Way Express	Only Way Express	Only Way Express	Only Way Express	Only Way Express	Only Way Express	Only Way Express	Only Way Express	Only Way Express	Only Way Express	Only Way Express	Only Way Express	
72.74 Evanston	6.51	7.52	8.37			6.51	9.37	9.49		11.07	11.49	11.49	11.49	11.49	11.49	11.49	11.49	11.49	11.49	11.49	11.49	11.49	11.49	11.49	11.49	11.49	11.49	11.49	11.49	11.49	11.49	
51.49 No. Chicago Jct. (28)	6.45	7.45	7.30			6.45	8.30	9.01		10.00	10.01	10.03	10.03	10.03	10.03	10.03	10.03	10.03	10.03	10.03	10.03	10.03	10.03	10.03	10.03	10.03	10.03	10.03	10.03	10.03	10.03	
51.20 Valley Jct. (31)	6.42	7.42	7.28			6.42	8.28	8.59		9.58	9.59	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	
49.03 Thirty-Two (33)	6.18	7.24	7.24			6.18	8.24	8.57		9.54	9.57	10.57	11.54	11.54	11.54	11.54	11.54	11.54	11.54	11.54	11.54	11.54	11.54	11.54	11.54	11.54	11.54	11.54	11.54	11.54	11.54	
48.38 Edison St. (37)	6.14	7.21	7.21			6.14	8.21	8.54		9.51	9.54	10.54	11.51	11.51	11.51	11.51	11.51	11.51	11.51	11.51	11.51	11.51	11.51	11.51	11.51	11.51	11.51	11.51	11.51	11.51	11.51	
45.67 Golf (41)	6.06	7.15	7.15			6.06	8.05	8.50		9.45	9.50	10.50	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	
42.29 Elm City (38)	6.01	7.08	7.08			6.01	8.05	8.45		9.38	9.45	10.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	11.45	
39.39 McCook (47)	5.95	7.02	7.02			5.95	7.57	8.37		9.27	9.37	10.37	11.37	11.37	11.37	11.37	11.37	11.37	11.37	11.37	11.37	11.37	11.37	11.37	11.37	11.37	11.37	11.37	11.37	11.37	11.37	
37.36 Kenosha (49)	5.90	6.97	6.97			5.90	7.49	8.32		9.19	9.32	10.32	11.19	11.19	11.19	11.19	11.19	11.19	11.19	11.19	11.19	11.19	11.19	11.19	11.19	11.19	11.19	11.19	11.19	11.19	11.19	
32.23 Kenosha Tower (49)	5.85	6.92	6.92			5.85	7.47	8.30		9.17	9.30	10.30	11.17	11.17	11.17	11.17	11.17	11.17	11.17	11.17	11.17	11.17	11.17	11.17	11.17	11.17	11.17	11.17	11.17	11.17	11.17	
29.83 Birch (52)	5.80	6.87	6.87			5.80	7.40	8.25		9.10	9.25	10.25	11.10	11.10	11.10	11.10	11.10	11.10	11.10	11.10	11.10	11.10	11.10	11.10	11.10	11.10	11.10	11.10	11.10	11.10	11.10	
27.07 Piper (55)	5.75	6.82	6.82			5.75	7.35	8.22		9.05	9.22	10.22	11.05	11.05	11.05	11.05	11.05	11.05	11.05	11.05	11.05	11.05	11.05	11.05	11.05	11.05	11.05	11.05	11.05	11.05	11.05	
25.85 Beabe (57)	5.70	6.77	6.77			5.70	7.30	8.20		9.03	9.20	10.20	11.03	11.03	11.03	11.03	11.03	11.03	11.03	11.03	11.03	11.03	11.03	11.03	11.03	11.03	11.03	11.03	11.03	11.03	11.03	
24.02 Racine Tower (58)	5.65	6.72	6.72			5.65	7.30	8.15		9.00	9.15	10.15	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	
23.42 Racine (61)	5.60	6.67	6.67			5.60	7.29	8.17		8.99	9.17	10.17	10.99	10.99	10.99	10.99	10.99	10.99	10.99	10.99	10.99	10.99	10.99	10.99	10.99	10.99	10.99	10.99	10.99	10.99	10.99	
21.53 Quarry (65)	5.55	6.62	6.62			5.55	7.24	8.13		8.94	9.13	10.13	10.94	10.94	10.94	10.94	10.94	10.94	10.94	10.94	10.94	10.94	10.94	10.94	10.94	10.94	10.94	10.94	10.94	10.94	10.94	
19.42 Root River So. (67)	5.50	6.57	6.57			5.50	7.19	8.09		8.89	9.09	10.09	10.89	10.89	10.89	10.89	10.89	10.89	10.89	10.89	10.89	10.89	10.89	10.89	10.89	10.89	10.89	10.89	10.89	10.89	10.89	
19.02 Root River Mo. (68)	5.45	6.52	6.52			5.45	7.18	8.08		8.88	9.08	10.08	10.88	10.88	10.88	10.88	10.88	10.88	10.88	10.88	10.88	10.88	10.88	10.88	10.88	10.88	10.88	10.88	10.88	10.88	10.88	
17.41 Fire Mile (70)	5.40	6.47	6.47			5.40	7.15	8.06		8.85	9.05	10.05	10.85	10.85	10.85	10.85	10.85	10.85	10.85	10.85	10.85	10.85	10.85	10.85	10.85	10.85	10.85	10.85	10.85	10.85	10.85	
16.02 Northwestern (71)	5.35	6.42	6.42			5.35	7.10	8.00		8.82	9.00	10.00	10.82	10.82	10.82	10.82	10.82	10.82	10.82	10.82	10.82	10.82	10.82	10.82	10.82	10.82	10.82	10.82	10.82	10.82	10.82	
12.42 Carrollville (73)	5.30	6.37	6.37			5.30	7.05	7.99		8.85	9.05	10.05	10.85	10.85	10.85	10.85	10.85	10.85	10.85	10.85	10.85	10.85	10.85	10.85	10.85	10.85	10.85	10.85	10.85	10.85	10.85	
9.00 Racine (75)	5.25	6.32	6.32			5.25	7.00	7.95		8.80	9.00	10.00	10.80	10.80	10.80	10.80	10.80	10.80	10.80	10.80	10.80	10.80	10.80	10.80	10.80	10.80	10.80	10.80	10.80	10.80	10.80	
6.78 Grange (76)	5.20	6.27	6.27			5.20	6.95	7.92		8.75	8.95	9.95	10.75	10.75	10.75	10.75	10.75	10.75	10.75	10.75	10.75	10.75	10.75	10.75	10.75	10.75	10.75	10.75	10.75	10.75	10.75	
4.81 Howard (78)	5.15	6.22	6.22			5.15	6.95	7.95		8.72	8.95	9.92	10.72	10.72	10.72	10.72	10.72	10.72	10.72	10.72	10.72	10.72	10.72	10.72	10.72	10.72	10.72	10.72	10.72	10.72	10.72	
1.51 Harrison (81)	5.10	6.15	6.15			5.10	6.87	7.45		8.37	8.45	9.45	10.17	10.17	10.17	10.17	10.17	10.17	10.17	10.17	10.17	10.17	10.17	10.17	10.17	10.17	10.17	10.17	10.17	10.17	10.17	
1.50 National Ave. (82)	5.05	6.10	6.10			5.05	6.82	7.36		8.30	8.36	9.36	10.07	10.07	10.07	10.07	10.07	10.07	10.07	10.07	10.07	10.07	10.07	10.07	10.07	10.07	10.07	10.07	10.07	10.07	10.07	
0.00 Milwaukee (83)	5.00	6.05	6.05			5.00	6.80	7.40		8.30	8.40	9.40	10.10	10.10	10.10	10.10	10.10	10.10	10.10	10.10	10.10	10.10	10.10	10.10	10.10	10.10	10.10	10.10	10.10	10.10	10.10	

Special Rules

1. SUPERIORITY BETWEEN HARRISON AND CARROLLVILLE

Nos. 61 and 62 are second class trains and must keep out of the way of and clear the time of first class trains at least five (5) minutes. See also Note 4, page 16. All other trains shown herein are first class and have equal rights as between themselves except as follows:

On the single track between and at Harrison and Carrollville, southbound regular trains are superior by direction to northbound trains of the same class. Any train so superior by direction (southbound) has an absolute time table right to the track, and any regular train of the same class in the inferior direction (northbound) must be clear of the main track before the leaving time of the superior train of the same class.

If a southbound train finds an inferior train of the same class overdu at Harrison, or if it does not find the expected train of the same class at a scheduled meeting point, it will, after coming to a full stop, and after complying with last paragraph of this rule, proceed, approaching all sidings prepared to stop until the expected train is met. See Note 6, page 20. No. 423 is only required to be clear at Harrison before 10:37 p. m. No. 24 will wait at Harrison until No. 423 arrives, No. 421 having right over No. 24.

When scheduled meeting point is shown at Rawson for a first class south bound train, such south bound train will be due to leave Rawson at the time shown in its schedule, if it has met the train or trains to be met at Rawson. If however, the train or trains to be met have not arrived, such south bound train will not be due to leave Rawson until five (5) minutes after the time shown in its schedule, and the inferior train of the same class will be required to clear such later time.

2. PASSING POINTS.

At passing points between trains of the same class the train to be passed may proceed before the arrival of the following train on verbal orders from the dispatcher, and the following train will run, expecting to find the other ahead, but limits must not be delayed. Local trains must in all cases avoid delay to limits. Should a local train be unable to reach scheduled passing point in time to avoid delay to a following limited, it will allow the limited to pass before reaching such point, without orders from the dispatcher.

3. REGISTERING.

All trains will register at Evanston, Highwood, N. Chicago Jet, Carrollville and Harrison. The register must show the date at top of page, the train number, car number, arriving time, kind of signals carried at any time on the train, and the points from and to which signals were carried, and will be signed in the proper place by the senior conductor. If the train stays at the register station longer than two (2) minutes, both the arriving and leaving time will be shown on register. Otherwise, the arriving time only. Harrison is the initial station for trains running out of Milwaukee, and N. Chicago Jet is the initial station for trains running from Waukegan. All trains will report to dispatcher at register stations unless telephone line is out of order. Extra trains are required to report in any event before leaving. All trains running on Libertyville Branch will register at Lake Bluff Jet.

4. TEMPORARY SINGLE TRACK.

When temporary single track is established, no train of any class or direction may leave the end of double track without train orders.

5. OPERATION BETWEEN ROSE AND KENNEDY.

Bulletin No. 28, dated March 11, 1914, will govern between Rose and Kennedy.

6. MOVEMENT OF TRAINS IN YARDS.

All trains will approach and pass through yards under control, expecting to find the track obstructed. Yard motors and extra trains may make movements inside yards on verbal orders from the dispatcher, and the above instructions will not apply inside yards, neither will such motors or trains, when inside yards be required to clear the time of regular trains as required outside of yards. They will, however, avoid delay to regular trains and will use such protection as may be necessary.

7. MEETING POINTS AT ENDS OF DOUBLE TRACK.

Meeting points are shown at ends of double track when the difference between the times of opposing trains is five (5) minutes or less.

8. LOCATION OF YARDS.

Yards are located as follows:

Highwood Yards.

From a point three hundred (300) feet north of the Highwood Ave. station platform to a point five hundred (500) feet north of the C. & N. W. spur track crossing.

North Chicago Yards.

From a point five hundred (500) feet south of the Naval Station switch to a point five hundred (500) feet north of the Valley Jet, switch, and from Valley Jet, south on the west line cut-off to Green Bay Jet, and from N. Chicago Jet, north on the east line through Waukegan.

Waukegan Yards.

Five hundred (500) feet each way, north and south, from Edison Ct. switch, and on Electric Park line.

Milwaukee Yards.

From the north end of Filer & Stowell Trestle north.

9. SLOW ORDERS AND SAFETY STOPS.

(a). General.—Weather conditions, places and circumstances will always be taken into consideration in determining the speed of trains. Trainmen are required to use good judgment in this respect even though the case is not covered by the rules or special instructions. Fast scheduled time between any two points is not license to operate trains faster than allowed by good judgment, the rules or special instructions.

(b). At Gauntlet in Glencoe.—All trains will approach and run through the gauntlet track at Glencoe under full control. Should opposing regular trains approach this gauntlet at the same time the north bound will wait for the south bound except that locals will wait for limited.

(c). Approaching Crossovers.—All trains will approach crossovers under control expecting to find the track obstructed. This does not relieve trainmen from using necessary protection when crossing over.

(d). Spring Switches.—Trains running over facing point spring switches will be kept under such control as will enable them to be stopped at once should switches split. Trains will not exceed fifteen (15) miles per hour when running through trailing spring switches set for other tracks.

(e). Signal Trolley Switches.—Trains must not exceed ten (10) miles per hour at block signal trolley switches.

(f). Over Railroad Crossings.—Trains will not exceed fifteen (15) miles per hour when passing over railroad crossings or between the derails at interlocking. Full stops will be made before running over unprotected crossings.

(g). Trestles.—At following trestles: Filer & Stowell, St. Paul, St. Francis Cut-off and Bottom St., trains must be brought almost to stop just before running onto trestle and will then either coast over or run over on one point. Neither brakes nor power will be applied while train is on trestle.

(h). TOWNS.—Trains will not exceed the following speeds and will make the following safety stops:

Wilmette—Eight (8) miles per hour across streets Fifteen (15) miles per hour on Greenleaf Ave., six (6) miles per hour across Lake Ave. South bound trains, full stop just before crossing Central Ave.

Kenilworth—Fifteen (15) miles per hour on the streets. Eight (8) miles per hour across streets. Full stop at Kenilworth station.

Winnetka—Fifteen (15) miles per hour on the streets. Eight (8) miles per hour across streets. Full stop just before crossing Elm St. Six (6) miles per hour across Winnetka Ave. between the hours of 8:00 a. m. and 9:00 a. m. and between 2:00 p. m. and 3:30 p. m.

Hubbard Woods—Series only while on Hubbard St. Eight (8) miles per hour across Hiawatha Ave. (Glencoe)—Full stop just before crossing Park Ave.

Ravenna—Eight (8) miles per hour across Roger Williams Ave.

Highland Park—Eight (8) miles per hour across Lincoln Ave. Full stop just before crossing Laurel Ave. South bound trains right (8) miles per hour across, and north bound trains, full stop just before crossing Central Ave. North bound trains, right (8) miles per hour across, and south bound trains, full stop just before crossing Elm Place.

Highwood—Eight (8) miles per hour across Highwood Ave. and Washington Ave.

Lake Forest—Full stops just before crossing Deerpath Ave. and Westmister Ave.

Lake Bluff—Eight (8) miles per hour across street running into C. & N. W. station.

Zion City—Between the hours of 8:00 a. m. and 9:00 a. m. all trains will approach and cross 21st St. under control.

Racine—Six (6) miles per hour across Twelfth St. just South of passenger depot.

Milwaukee—Series only.

MULTIPLE-RIDE AND COMMUTATION TICKET FORMS

Date in effect	Date cancelled
----------------	----------------

BEARER TICKETS

10-ride	Sept. 18, 1919	----
25-ride	Feb. 15, 1914	Oct. 1, 1934 except between Chicago and Illinois points

MILEAGE BOOKS

500-mile	June 1, 1926	Jan. 15, 1928
1000-mile	Dec. 19, 1918	Jan. 15, 1928

INDIVIDUAL TICKETS

12-ride weekly	Nov. 1, 1931	----
46-ride monthly	June 30, 1948	----
50-ride monthly	Feb. 14, 1923	----
52-ride monthly	Dec. 1, 1916	Mar. 21, 1921
54-ride monthly	June 30, 1948	Feb. 28, 1953
60-ride monthly	Sept. 1, 1920	June 30, 1948
Unrestricted monthly	Feb. 28, 1953	----
50-ride student	Dec. 18, 1918	----

IMPROVED FARE SYSTEMS ARE DEVELOPED

By about 1918 costs had increased to the point where the railway was hampered by the old pattern of nickel fare zones. Especially during the war, prices had skyrocketed, and it became necessary to petition for increased fares. A 2¢ per mile base became standard, with the rates on Illinois traffic thus raised to match a Wisconsin intrastate fare level achieved somewhat earlier. In the process, the transition from street railway to interurban practice in fare collection was accomplished. Even the first of the steel cars had carried registers for ringing up the zone fares in multiples of the old 5¢ base charge.

North Shore Line improved station and accounting efficiency with installation of ticket-printing machines in all principal passenger stations. One-way tickets printed by these machines had a coupon detached by the train conductor and clipped above the passenger's seat. This served as a "hat check" and also cancelled the remaining coupon of the ticket by its removal.

Through tickets were sold to cover both the rail and the motor coach portion of the coordinated rail-bus service.

As early as 1904 there had been a few forms of multiple-ride and individual 60-day tickets. Eventually a comprehensive system of multiple tickets was instituted, as indicated in the accompanying table. Several of these which were especially well adapted to commuter traffic remained in use for years.

11. WHISTLING

Except when necessary to prevent accident, the whistle will not be sounded in Milwaukee, Waukegan on east line, Lake Forest, Highland Park and in all towns from Glenview south. All signals to stop or start the train will be answered either by going or whistle. Except where forbidden the road crossing whistle must be sounded as the train approaches each crossing.

12. LIBERTYVILLE CONNECTIONS, ETC.

The following trains will connect with Libertyville, Ill., No. 100, 105, 111, 117, 121, 125, 131, 137, 141, 145, 151, 155, 159, 165, 171, 175, 181, 185, 191, 195, 201, 205, 211, 215, 221, 225, 231, 235, 241, 245, 251, 255, 261, 265, 271, 275, 281, 285, 291, 295.

All northbound limited trains except No. 525 will stop at Lake Bluff Jet. on signal from Libertyville conductor to pick up passengers holding tickets from stations on Libertyville branch to limited stations north of Edison Ct. Or to discharge passengers holding tickets from Evanston to points on the Libertyville branch. All southbound limiteds except Nos. 525 and 526 will stop at Lake Bluff Jet. to let off passengers holding tickets from stations north of Edison Ct. to stations on the Libertyville branch. Through cash duplex will be considered a ticket.

Stops will be made at Highwood Ave., Highwood, by the same limited trains as above, for passengers holding tickets between Highwood and limited stations north of Edison Ct. North bound trains will be flagged by agent. No. 425 will stop at Highwood Ave., Highwood, on signal for passengers, who will not be required to have tickets.

All north bound limiteds, except No. 525, will stop at Highwood Ave., to discharge passengers holding tickets from Evanston. All south bound limiteds up to and including No. 420, will stop on signal from the agent at Highwood Ave., to receive passengers holding tickets to Evanston.

South bound limiteds due at Highwood after 6.16 p. m., will not stop at Highwood Ave.

13. MEETING AND PASSING POINTS.

Meeting and passing points are indicated on this timetable by figures in full face type. Small figures above such time indicate the train or trains to be met, and small figures below indicate the train or trains to pass or be passed.

14. ON LINES OF OTHER COMPANIES

Trainsmen while on the lines of the Northwestern Elevated R. R. Co. and the Chicago and Milwaukee

Electric Railway Co., will be subject to the rules of those companies.

15. STOPS ON LIMITED TRAINS

Limited trains will make the following stops to take on passengers north bound and to discharge passengers south bound:

London Avenue, Waukegan (north bound only)
Central Street, Waukegan
Kenilworth Station
Edin Street, Waukegan
Park Avenue, Glenview

To take on passengers and discharge passengers in both directions:

Central Street, Evanston
Central Avenue, Highland Park
Doverport Avenue, Lake Forest
North Chicago Junction
Edison Court, Waukegan
Salmon Blvd., Zion City
Kenosha Station
Harne Station

To discharge passengers north bound and to take on passengers south bound:

Harison
Mitschell Street, Milwaukee
National Avenue, Milwaukee
Fifth and Grand Ave., Milwaukee
Fifth and Wells Sts., Milwaukee

See Special Rule 12.

16. TRAINS TWO HOURS LATE

Any trains becoming two hours late will lose both right and claim and cannot therefore proceed except by train order. See Note 4, Page 16.

17. CURRENT OF TRAFFIC

On double track an I between Kenosha and Grange trains will use right hand track, except as provided by Notes 2 and 5, pages 15 and 17.

18. DELAYING OTHER TRAINS

As soon as it becomes apparent that any train will delay another at meeting point the dispatcher must be notified at the first available telephone. An inferior train unable to make a scheduled meeting point will call the dispatcher for orders.

19. FUSES

A fuse burning red, on or near the track, may be passed only after the train has remained at full stop for one minute, and the train will then proceed under control until the obstruction is passed, or until a clear signal is received. Fuses will not be sufficient protection against superior trains.

20. RIGHT, CLASS AND DIRECTION.

A train may be made superior to another train by flag I, Class 1, Direction. Right is conferred by Train order, Class and Direction by time table. Right is superior to Class and Direction. Direction is superior between trains of the same class on single track only, as specified.

21. MILWAUKEE CONNECTIONS.

On Saturday and Sunday, unless otherwise instructed by Dispatcher, No. 11 will wait at No. Chicago Jet. for No. 119, and No. 202 will wait there for No. 24.

Remainder of special rules from the 1914 timetable. Note conditional stops on limiteds, designed to divert short-distance riders to other trains. (GK)

MORE "NAME TRAINS" OPERATE

New names for limited trains appeared as the number of extra-fast trips increased. Such tags as the "All-Steel Limited," new in December 1917; the "Badger Limited" and "Interstate Limited," in 1920; the "Cream City Special" and "Prairie State Special," in 1923, appeared in timetables and on train destination signs. These trips generally carried diners, parlor cars, or both, and made fewer stops than the hourly coach limiteds. Most train names were used for a trip in each direction, but a new round trip in July 1925 was called the "Northland Limited" when leaving Chicago at 8:00 AM and the "Metropolitan" when returning from Milwaukee at 3:55 PM. These runs were scheduled to make no passenger stops between Evanston and Milwaukee. Names were chosen in a public contest with an award of \$20 for the winner—and the reward to the railway of much favorable publicity.

By the mid-1920's, then, limited service consisted of an hourly train ("Your watch is your time card") making one or two stops in each municipality between Chicago and Milwaukee. Name trains making faster trips as required by conditions operated between the hourly limiteds. Tried for a while was a uniform 30-minute headway between Milwaukee, Racine, and Kenosha, but there was not sufficient intercity traffic in Wisconsin to support such a frequent service, especially considering Milwaukee Electric service which paralleled North Shore Line in this area.

NEW YORK CONNECTIONS ARE SET UP

A train especially deserving of notice was added early in 1922. Leaving Milwaukee at 9:55 AM, it made a fast run to LaSalle Street station on the downtown "L" Loop in Chicago, where a prompt connection was made to the New York Central System's Twentieth Century Limited. Businessmen of Milwaukee, Racine, and Kenosha were thus provided with convenient morning departures from their cities for East Coast points. In the opposite direction, the North Shore Line train made an extra half-circuit of the "L" Loop to meet the arriving Twentieth Century.



A Typical Hour's Mainline Trains-1919

Lv. Adams & Wabash	Lv. Church Street, Evanston	Lv. N. Chicago Junction	Description of Train	Average Speed, Evanston- N. Chgo. Junction	Average Speed, Entire Run	Passenger Stops
.....	10:00	11:06	Daily Local to Waukegan (East Line)	19.5 MPH	18.8 MPH	Every block
9:30	10:09	11:00	Weekday Express to Waukegan (West Line)	25.2 MPH	23.6 MPH	Every town
			Sunday or Saturday-Sunday Express to Milwaukee	25.2 MPH	30.9 MPH	Every town
			10:20	11:26	Daily Local to Waukegan (East Line)
10:00	10:39	11:30	Daily Limited to Milwaukee	25.2 MPH	30.9 MPH	Every town for long-distance riders
.....	10:40	11:46	Daily Local to Waukegan (East Line)	19.5 MPH	18.8 MPH	Every block
.....	11:50	Daily Local to Milwaukee (alternate hours only)	26.6 MPH	Every block or every town

Source: PS

The operational priority of limited and express trains over locals is indicated by train schedules. A local car of 1922, like Train 21 (below) took siding at Sacred Heart, Great Lakes, and Kenosha to clear more prestigious trains--and still others were due to come up right behind it at Kenosha and at Milwaukee Terminal! (PS)

[illegible]

		NORTHBOUND																(SUBJECT TO CHANGE WITHOUT NOT)															
TRAIN Nos.		547	425	140	545	8				32	581	427	147	583	143				585	429	151	587	35				589	431	153	591	156	542	562
Line	Time	Exp	Exp	Exp	Exp	Local	Exp	Local	Local	Local	Exp	Local	Local	Local	Exp	Local	Local	Local	Exp	Local	Local	Local	Exp	Local	Local	Local	Exp	Local	Local	Local	Exp	Local	Local
		Thru	Thru	Thru	Thru	Thru	Thru	Thru	Thru	Thru	Thru	Thru	Thru	Thru	Thru	Thru	Thru	Thru	Thru	Thru	Thru	Thru	Thru	Thru	Thru	Thru	Thru	Thru	Thru	Thru	Thru	Thru	
CHICAGO		PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM
0.0	3RD & DORCHESTER		4:22					6:26								6:32								7:35									
0.1	UNIVERSITY		4:23					6:27								6:33								7:36									
0.2	ROCKFORD GROVE		4:24					6:28								6:34								7:37									
0.3	COTTAGE LAKE		4:25					6:29								6:35								7:38									
0.4	COLUMBIAN		4:26					6:30								6:36								7:39									
0.5	CHICAGO STREET	4:46	6:11	5:11		5:41	6:51	6:16						6:46	6:56	7:16						7:46	9:06	8:16						8:46			
0.6	ROCKFORD GROVE		4:47					6:17								7:17								8:17									
0.7	LA SALLE & VAN BUREN		4:48					6:18								7:18								8:18									
0.8	LA SALLE & VAN BUREN		4:49					6:19								7:19								8:19									
0.9	LA SALLE & VAN BUREN		4:50					6:20								7:20								8:20									
1.0	LA SALLE & VAN BUREN		4:51					6:21								7:21								8:21									
1.1	LA SALLE & VAN BUREN		4:52					6:22								7:22								8:22									
1.2	LA SALLE & VAN BUREN		4:53					6:23								7:23								8:23									
1.3	LA SALLE & VAN BUREN		4:54					6:24								7:24								8:24									
1.4	LA SALLE & VAN BUREN		4:55					6:25								7:25								8:25									
1.5	LA SALLE & VAN BUREN		4:56					6:26								7:26								8:26									
1.6	LA SALLE & VAN BUREN		4:57					6:27								7:27																	

Even though the interurban line was essential to life in the suburban communities, governmental authority was still exercised--sometimes arbitrarily and there were times of friction. Perhaps this was because the railway, running as it did through the central shopping areas of

It was the eight blocks of street running on Greenleaf Avenue, Wilmette, that caused the greatest problems. The village required by franchise that all trains stop for passengers at each street crossing--and limited trains were not exempt. The result was that, even though North Shore Line did not advertise the street flagstops, some residents would regularly flag down a Milwaukee Limited to ride a block or two. Train crews were not always cooperative, and in the period before the street was solidly lined with residences, some trains were being operated at speeds greatly in excess of the 15 mile per hour restriction. North Shore Line kept up a constant propaganda campaign for relief from the numerous stops in the hope that public opinion would force the village trustees to relent, but there was no success until after World War I.

Jim.—Limited Trains. Exp.—Express Trains. All P, M, time in heavy figures; A, M, time in light figures.
—Connects with Libertyville Division.
—Carr—Carriage baggage.
Train 437 will stop at Indian Hill and Ravine to discharge Chicago passengers and
Dining Car Service on Trains Nos. 901-415-905 Daily
Dining Car Service on Train No. 417 Saturday only
Parlor Car and Buffet Service on Train No. 903 Daily.

The metropolis of Wisconsin, is located at the northern terminus of the North Shore Line. While it is a thriving industrial city, it also has many recreational attractions. Its boulevard and park systems are copied by many of our leading cities, and the museum is compared favorably with the National Museum in Washington, D. C.

HEAVY TRAFFIC REQUIRES EXTRA MOVES

Special passenger train movements have long been a part of the railway's operations. Around the turn of the century a ride in the country was regarded as a splendid means of recreation by city dwellers taking a holiday—and some of the longer trolley lines reaching out from Chicago were the most popular excursion routes. The flow of individuals, families, and small informal groups using Chicago & Milwaukee Electric service from Evanston on Sundays overshadowed the regular weekday traffic and frequently called for operation of more trains than provided for in the regular schedule.

Sheridan Park at Highwood and Ravinia Park just north of Glencoe both produced a great deal of traffic, as similar parks all over the country were doing for other electric lines. Both had been built by the railway and Ravinia, in particular, became popular primarily as an amusement park in a day before its fame as summer location of the Chicago Symphony Orchestra. Occasionally faced with crowds too large to be handled by its own equipment, C&ME resorted when necessary to hauling long trains of Northwestern Elevated Railway trailers behind its electric locomotives.

The attractions requiring extra passenger service in later years included events in Chicago as well as those in outlying areas. One rather unusual operation came about during the opera season of 1922. The "Grand Opera Special" left Milwaukee each Thursday at 5:25 PM, received passengers at limited stops enroute, and ran direct to Congress & Wabash in Chicago. A canopy was erected from the "L" station exit here to the Auditorium Theatre so that opera-goers were at no time exposed to the weather. The special included a dining car serving dinner on the southbound trip and light suppers in the homeward direction. Reading between the lines of the announcement, one feels that white tie and tails were welcome on the special. Apparently, though, passengers weren't numerous, for the next season the announcement was merely that trains would stop at Congress & Wabash at times convenient to the performances.

PRIVATE CHARTERS ARE ALSO OPERATED

It should be noted that all of these operations involved extra trains carrying individual passengers at the usual tariff rates, rather than organizations chartering cars or trains exclusively for movements of a formal group. The latter class of traffic was, however, promptly developed upon takeover of the road by the Insull management. Special cars attached to regular trains or, particularly, special chartered trains were a convenient method of transportation for groups since all members could be kept together

enroute and moved quickly to destination at a convenient time. The small operating unit of a short train or even a single car having only a two-man crew meant, too, that as few as thirty or forty passengers could be handled economically in those days of low costs.

One of the earliest charter customers was the Army. In response to a quartermasters' circular dated December 6, 1916, North Shore Line had submitted a bid to transport troops of the Third Wisconsin Infantry from Fort Sheridan to Milwaukee at a rate of \$1.15 per capita less 8%. This represented a substantial saving compared to the lowest bid of the steam roads. This contract was reported to be the first between the Regular Army and an electric line.

North Shore Line handled 762 officers and troops requiring 21 passenger cars and 9 cars of baggage. On the night of December 13, a locomotive-hauled train of seven North Shore Line box cars and a caboose with an escort left Fort Sheridan for Milwaukee. The next morning after 10 AM, seven special three-car trains—composed entirely of the then-new 150-series steel cars—began loading 40 men to a car and departing for Milwaukee as soon as loaded. At destination, the soldiers were unloaded on the street in front of the Chicago Milwaukee & St. Paul station where the men boarded steam trains to continue their trips home. The limitations in train length can be traced to the problems of street running and unloading in Milwaukee as well as to the practice of keeping trains short in those early years.

Throughout the war, special trains were made available to handle troop movements from Chicago to Fort Sheridan or the Great Lakes Naval Training Station. If all available North Shore Line cars were in use, "L" cars were pressed into service. It was not at all unusual for North Shore Line to receive short notice that a body of several hundred men would reach Chicago on one of the steam railroads. North Shore Line representatives would be on hand to see that the men got a meal and then to take them to a waiting special train which would carry the men promptly to destination.



North Shore Line Service
to
Northern Michigan
Resorts

LUDINGTON, MICHIGAN
Hamlin Lake

MANISTEE, MICHIGAN



<p>One Way Fares from Chicago—Ludington \$6.56 Round Trip (Summer Excursion)—Ludington 9.00</p> <p>Through rates and service to these Northern Michigan Resorts via the steel arched Skokie Valley over the North Shore Line to Milwaukee, thence cross lake via Pere Marquette Line Steamers. Daily service during the summer season. Interstate Limited leaves Chicago 5:00 P.M.</p> <p>J. M. Michaels, A. G. P. A., Central 8280, 79 W. Monroe St., Chicago</p>	<p>Manistee \$ 7.06 Manistee 10.00</p> <p>Standard Time. Arrives Milwaukee 7:00 Steamer sails 8:00 P.M. Arrives early next morn. North Shore Line Ticket Agent will make steamer reservations; also furnish resort information.</p>
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Chicago North Shore and Milwaukee Railroad Company

A BATTLESHIP TRAVELS NORTH SHORE

On May 28, 1918, a war special of a different kind started on the "L" and covered North Shore Line—with part of it going farther afield than most North Shore specials. A party of French Army Alpine Chasseurs or "Blue Devils" was touring the United States and arrived in Chicago at the old Union Depot. Two special trains were parked nearby on the Market Street stub of the Lake Street "L." One consisted entirely of North Shore Line coaches. The other included three North Shore flat cars which had been decorated at Highwood as a battleship, a submarine, and a sub-chaser respectively. The special toured the downtown area and then went out over North Shore Line to Great Lakes, receiving ovations all along the way.

The decorated train was subsequently operated regularly. Studded with marines and bristling with small arms—some of which were fired at intervals "to attract attention," according to contemporary report—the train circled the downtown "L" Loop in Chicago. A recruiting office in one of North Shore Line's steel coaches and a parlor-diner unit were also included in the consist. At the end of the day, the equipment cruised to Great Lakes with the recruits. Similarly, part of the train made a day's campaign on the Aurora Elgin & Chicago Railway and toured many of the interurban lines in Illinois, Indiana, and Ohio.

Wartime travel restrictions probably account for one of those long-distance runs of North Shore Line equipment which form a part of the road's legends. The Illinois Furniture Warehousemen's Association found it impossible to have the 1918 convention at Saranac Lake, New York. Thanks to North Shore Line, Elkhart Lake, Wisconsin, was chosen and on June 21, 1918, a special consisting of three coaches and a baggage car left Chicago. Beyond Milwaukee, tracks of the Milwaukee Northern Railway and the Eastern Wisconsin Electric Company were used.

CELEBRITIES FIND SERVICE CONVENIENT

Trying for all the publicity possible, North Shore Line dubbed itself "The Official Way" in April 1918 when it carried two cabinet officers, Josephus Daniels, Secretary of the Navy, and William Gibbs McAdoo, Secretary of the Treasury and Director General of the Railroads, in special trains from Chicago on official inspection tours of the Great Lakes Naval Training Station. A dining car on McAdoo's special made it possible for him to have breakfast on the way.

Even as late as 1921, top government officials were not averse to using interurbans. On May 2 of that year, Secretary of the Navy Denby paid an official visit to Great Lakes. A four-car special headed by the 152 and including a parlor car started from North Water Terminal to run to the base and back.

Another event which might have become a Government party, but didn't, occurred when North Shore Line played a role in the 1924 Presidential campaign. General Charles G. Dawes of Evanston, underslung pipe and all, traveled via North Shore Line to Milwaukee with a party of supporters for a campaign speech.

CHARTERS PROSPER IN PEACETIME

Other types of groups also chartered trains. On Christmas 1919, a company playing "Little Simplicity" at the LaSalle Theatre in Chicago cancelled its matinee and took a special North Shore Line train to Fort Sheridan to entertain the wounded soldiers recovering in the base hospital.

In the summer of 1924, the Chicago and Cook County Bankers Association held a golf tournament at the Kenosha Country Club, along the tracks six miles north of Kenosha. North Shore Line motor coaches were used to pick up the members at their Chicago homes and deposit them at Adams & Wabash. A special train including an observation unit made a fast run to stop practically at the door of the clubhouse as other Golf Specials frequently did.

Inspection trips of the electric line were operated before the day of the "fan," for on May 22, 1922, a special train carried a party including Sir Vincent L. Raven, Chief Mechanical Engineer of the Northeastern Railway of England, on a tour of the entire road and its facilities. On the return to Chicago the special covered the line from 6th & Clybourn terminal in Milwaukee to the Chicago Loop in an even two hours. Considering the speed restrictions in the towns south of Lake Bluff, such a move called for some fast running on the Milwaukee Division.

It should be noted that some of these specials antedated regularly scheduled North Shore Line passenger service into Chicago, which did not begin until August 6, 1919. Probably that, as

ough this advertisement was not issued until 1927, it suggests the close cooperation connecting transportation companies that characteristic of North Shore Line in earlier as well. (GK)

well as the conditions peculiar to each trip, was responsible for the variety of different Chicago terminal facilities which were used by the early special moves. The first operation of North Shore Line passenger cars directly into Chicago had occurred on November 6, 1916, in connection with a charter movement from Glencoe to the Chicago Stock Yards.

FRATERNAL GROUPS USE SPECIAL TRAINS

The Passenger Traffic Department of North Shore Line secured a firm foothold in the special train traffic of the 1920's by making a bid for fraternal and lodge traffic. With highways still poor and automobiles not much better, the fraternal groups were open to offers of chartered train service as visits were made to lodges in other cities. Popular devices among the organizations were the illuminated signs displaying the group emblems which the railway had constructed for mounting on the rear of special trains. These signs served both to identify the group and also to designate the proper train at loading points. Specials appear to have been run on every branch of the Chicago "L" and to both Elgin and Aurora on the connecting Chicago Aurora & Elgin Railroad. Indeed, a Milwaukee group on one occasion chartered a train via the North Shore Line, "L," Chicago Aurora & Elgin, Elgin & Belvidere Electric Company, and Rockford & Interurban Railway to Rockford to attend the dedication of a new Shrine Temple in that northern Illinois city.

Waukegan transfer dating back to the 1910 era was apparently issued on collection of either a local city fare or a rate covering trips to Great Lakes or to the golf course at Bonnie Brook, just north of town. (JMC)

Waukegan—North Chicago	
WASHINGTON STREET AND EDISON COURT	1 15
TO	30 45
WASHINGTON STREET	2 15
TO	30 45
GLEN FLORA	3 15
TO	30 45
GOLF CLUB	4 15
TO	30 45
CENTRAL PARK	5 15
TO	30 45
NORTH CHICAGO	6 15
TO	30 45
WASHINGTON AND GENESEE STREETS	7 15
TO	30 45
NORTH AVENUE	8 15
TO	30 45
ELECTRIC PARK	9 15
TO	30 45
NORTH CHICAGO & U.S. NAVAL STA.	10 15
TO	30 45
NORTH CHICAGO JUNCTION	11 15
TO	30 45
NORTH CHICAGO	12 15
TO	30 45
WAUKEGAN	13 15
TO	30 45
RECEIVERS	14 15
TO	30 45
TRANSFER	15 15
TO	30 45

EARLY WAUKEGAN CITY SERVICE

The early city streetcar operations in Waukegan-North Chicago were integral with the inter-city service which connected Waukegan with Highland Park and Evanston. This early inter-urban line, after all, had its inception as merely an extension of the local Waukegan service.

The lines north and west of downtown Waukegan came to be operated separately from the interurban service. The line to the north extended only a few blocks, but in the early 1900's such a short route served the populated part of town adequately. The branch extending west along Washington Street was over a mile in length by this time. It not only contacted the Edison Court station on the Milwaukee Division of the interurban but continued beyond that point a few blocks to Lewis Avenue, where a park had been established. Each of these city services required a car or two to maintain a regular 15-minute headway and, in addition, the Electric Park line on Washington Street must have operated a few extras in season. Rolling stock for the city service was little different from that used on the interurban and, in fact, the 29-38 series of 1905 St. Louis cars which provided the service for a while is best classified as a set of light inter-urban coaches.

Most of the Electric Park operation was on tracks owned by local interests organized as the Waukegan Fox Lake & Western Railway. It is reported that these facilities were used without compensation to the owners. Part of the city's requirement when granting a new franchise in 1917 was, however, that the rights of the Waukegan Fox Lake route be purchased by North Shore Line.

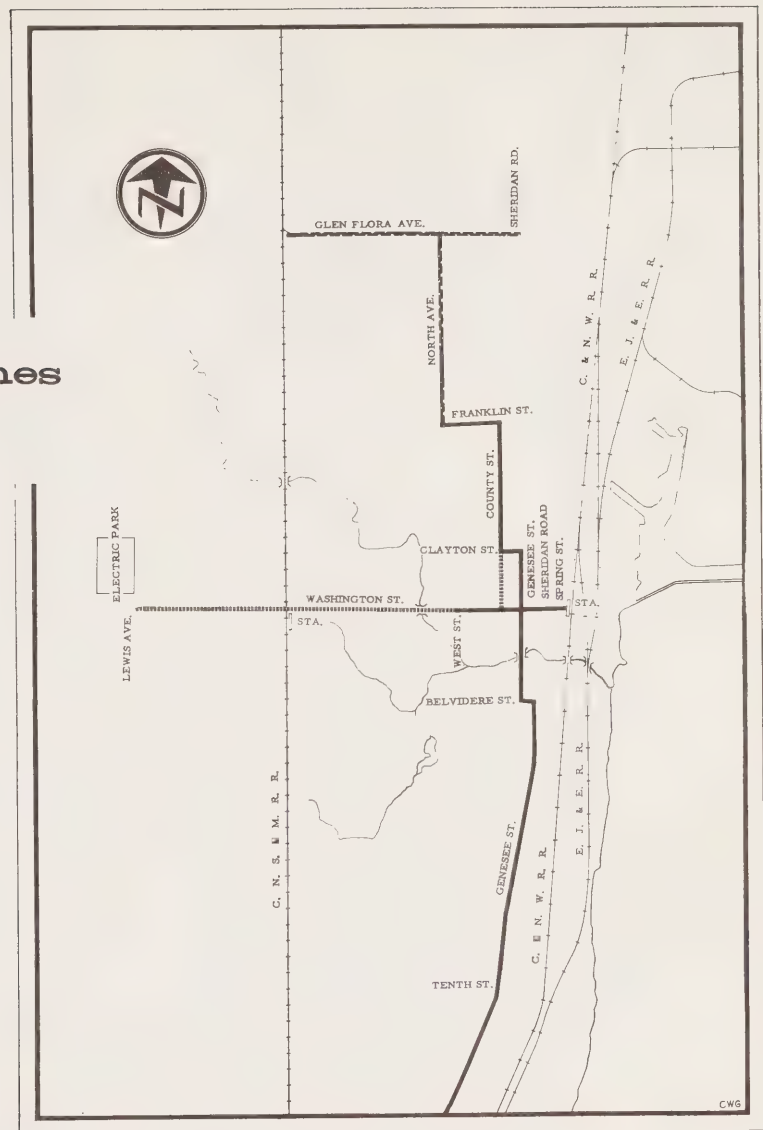
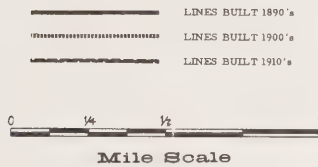
An additional city line service apparently ran north and south on the Milwaukee Division tracks for a time, although the area served could have been little more than an empty tableland cut by the ravines which lace through all of Waukegan.

THE CITY SYSTEM GROWS

In 1917 the accomplished and anticipated growth of the city to the north suggested extension of city service along North Avenue from the existing terminal at Franklin Street to Glen Flora Avenue. Here short branches to the east and west could contact points of potential traffic. The Glen Flora East service, operating to Sheridan Road, was to serve the new Victory Memorial Hospital, while the "tannery spur" on Glen Flora West would provide an additional point of connection with the Milwaukee Division. Besides, the Milwaukee Division and the two Glen Flora branches together provided an access route to the hospital heating plant for coal in carloads. The new services were begun early in 1918.

Improved trackage facilities in downtown Waukegan were laid out as part of the North Shore Line management's betterment program. This particular change involved routing all northbound and southbound city cars on partially double-tracked Genesee Street, in preference to the older routing which had provided a one-way loop via Genesee and County Streets.

Waukegan City Lines before 1926




Much-needed improvements in city rolling stock were introduced. Operations had been conducted exclusively with large wooden two-man cars. First, two second-hand cars were acquired from the Empire State Railways of New York. While these were not of the latest design for the time, they were of an arch-roof pattern perviously unknown to Waukegan city service. Moreover, their smaller size more nearly met the actual needs of the Washington Street service to which they were assigned.

BIRNEY CAR DAYS COME TO WAUKEGAN

The introduction of one-man operation came with North Shore Line's first lightweight single-truck Birney Safety Cars in 1920. These ten units were sufficient to provide base service. In the rush periods, eleven cars were needed, but a few of these were old deck-roof 500's converted for

one-man operation. Coincident with installation of the Birneys, basic headways were closed from 15 to 8 minutes. The 6¢ cash fare was supplemented by monthly commutation books at 4 1/2¢ per ride.

The trolley lines thus provided attractive and adequate service throughout the populated areas of Waukegan north and due west of the business district and supplemented the interurbans as far south as Great Lakes Naval Training Station. Residential areas had, however, grown up to the northwest and southwest. These had no near-by transit service except the occasional Milwaukee Division interurban locals running through their western edges. Hence operation of the first motor coach line began in the early 1920's. The bus operations were eventually to supplant streetcars entirely, but for many years they remained in the background as merely a supplementary service.



NORTH SHORE LINE

"When the Bell Rings-STOP!"


THERE are many highways that cross the North Shore Line between Evanston and Milwaukee. The traffic they bear is unusually heavy. So the safe-conduct of vehicles of every kind across our right of way and the undelayed passage of all North Shore trains through this area involves a clock-work system for controlling the two modes of travel wherever they intersect.

The North Shore crossing gateman is a most important factor of safety to North Shore communities. Protection is the paramount duty of nearly two hundred of these watchmen of the highways guarding in three eight-hour shifts sixty North Shore crossings.

Safety comes first, indisputably, on the North Shore Line, as the North Shore Line is one of the first in safety. Statistics prove it day by day.

Chicago North Shore and Milwaukee Railroad Company

Winnetka Passenger Station
Elm Street
Telephone Winnetka 963



One of North Shore Line's methods of keeping itself in the public mind was local newspaper advertising. This piece appeared (in much larger size) in a Winnetka paper of 1925. (AMC)

MILWAUKEE CITY SERVICE IS OPERATED

The Chicago & Milwaukee Electric Railway of Wisconsin began city car line service in Milwaukee on September 1, 1907, although the interurban line had not yet been completed outside town. Service was initially operated from Harrison Street, then the city limits, to the south end of the uncompleted 6th Street viaduct over the wide Menomonee River valley at the edge of downtown Milwaukee. The growing legal and financial difficulties besetting the road during 1907 forced discontinuance of this service on December 10th.

The tracks lay idle for nine months. On October 9, 1908, with completion of the viaduct and virtual readiness of the interurban line, city car operation was resumed. This time service ran from Harrison Street and crossed the viaduct to reach a downtown terminal at 2nd & Grand (now Wisconsin Avenue). With beginning of interurban service later in the month, the through trains from Evanston also used the city line tracks to reach 2nd & Grand. Another sharing of tracks came about with later extension of the Wells Street line of The Milwaukee Electric Railway & Light Company. This system, operator of the comprehensive streetcar system in Milwaukee, operated its Route 10-Wells cars via trackage rights over three blocks of the C&ME until 1958.

In addition to the fares collected on the city cars, the C&ME Railway received from its affiliate 4¢ per revenue passenger carried over its tracks on the interurban cars, plus the fixed amount of \$1700 per year after 1910. On the other hand, the city line owned no cars itself, but always rented its equipment from the parent company. In 1912, for example, this transaction involved ten cars at \$1.75 per day each. At first, light interurban cars of the 29-38 class were used. These were soon supplanted by more spacious cars of the 500 series.

During World War I, the government directed all street railways to institute skip-stop service to reduce power consumption. Thus minor stops were eliminated, often with cars stopping only every two blocks where cross streets were close together. This system was adopted in 1918 by The Milwaukee Electric, and the C&ME cars adopted the pattern also. At the same time, car stops were shifted to the near side of the street intersections.

The fare, typical of streetcar systems of the World War I period, was 5¢, with reductions being available through strip tickets sold until 1919 at 6 for 25¢ or 25 for \$1. There were no transfers to TMER&L, for that competing system had a universal transfer system of its own. Riders of the C&ME city line were, however, permitted a free transfer to the city line of the Milwaukee Northern Railway. In 1920, rising costs forced a fare increase to 6 cents. To provide the necessary service more economically and, hopefully, to change the operating loss to a profit, North Shore Line ordered Birney cars for the C&ME city run. When the cars went into service on February 18, 1923, the fare was reduced to 5¢ again and headways were closed from 10 to 6 minutes, since the lightweight cars permitted economies of both labor and power. These improvements resulted in a 58% increase in city line riding and a 32% increase in receipts with only an 11% rise in operating expenses, despite a wage increase made with the beginning of one-man operation.

Interestingly enough, these Birneys were the only ones to be regularly operated anywhere in Milwaukee. TMER&L apparently felt that its services were too heavily patronized to make operation of such small cars feasible, for in the 1920 era that company was coupling many of its older cars permanently into articulated two-car streetcar trains and the new single trolleys had capacities of 42 to 55—much greater than those of Birneys.

North Shore Line's Birneys assigned to Milwaukee were painted in the standard colors but were labeled "Chicago & Milwaukee Electric Railway" to reflect the actual corporate ownership of the city line by the older company. Operation of these small cars intermingled with parlor-observation-car trains of the parent company provided an interesting contrast between differing styles of electric railway practice.

With the double-tracking program of the early 1920's, the city service was extended about one-half mile from Harrison to Oklahoma Avenue. Only two new stops were thus added—both of them on a high fill above the paralleling 6th Street line of TMER&L. Yet the low fare of the North Shore Line cars must have been some incentive to passengers to climb the 58 steps to the platform at Oklahoma Avenue.

THE NEWS BECOMES A "RUSH" COMMODITY

Before the development of highways and powerful motor trucks, the North Shore Line played a major role in the distribution of the metropolitan newspapers. Papers were carried in combination passenger-baggage cars and on platforms of coaches. However, the largest movement was via the "Paper Special," which carried the early editions of the Chicago morning papers north during the midnight hours.

This operation had its inception on October 1, 1916, shortly after the Insull management took over, and even before through passenger trains to and from Chicago were being run. Arrangements were made to operate a car over the "L" tracks into Chicago to pick up a load of papers just off the presses. Initially the car loaded at Wells Street Terminal of the West Side "L" lines and of the Chicago Aurora & Elgin Railroad, which had pioneered in interurban newspaper haulage and enjoyed an extensive newspaper traffic from that point.* The car, operated by an "L" crew, would then back out of the Wells Street Terminal, circle the downtown "L" Loop, and head north with all signals set for a clear track and a fast run. A stop was made at Linden Avenue, Wilmette, to change crews, and from there North Shore Line booked the train to make Waukegan in 70 minutes, including stops where necessary to unload bundles too large to be thrown off "on the fly."

In later years, the crew change was dropped and the newspaper train was handled by North

Shore Line men over its entire run. Also within a few years, the origin point was changed to the more convenient North Water "L" terminal just north of the Loop. Here an electrically-driven conveyor belt brought the papers to the platform. By 1921 two specials were operated nightly, the first one handling the Wisconsin destinations and carded as the "Milwaukee Paper Special."

Undoubtedly the commuters southbound in the morning accepted their Tribunes and Interoceans as a matter of course with no thought of the feat required to make the paper available on their front doorstep or on the station newsstand in Winnetka, Lake Forest, or Racine.

MERCHANDISE DISPATCH IS DEVELOPED

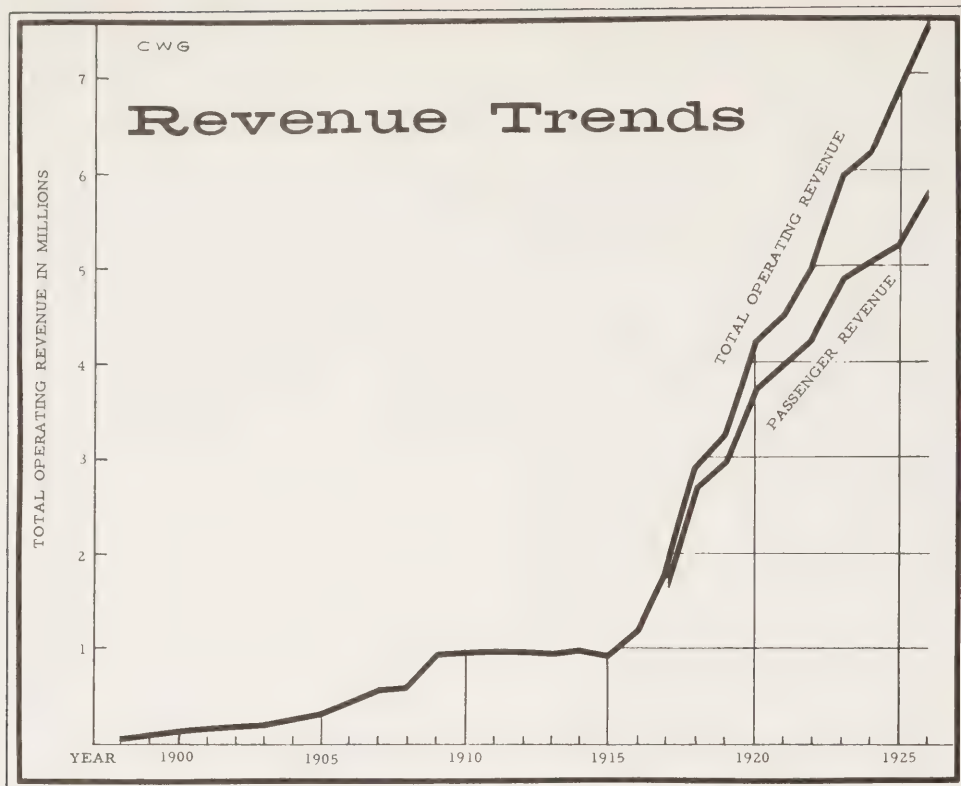
The newspaper traffic may have been the railway's first large-volume entry into material movement, but it was far from the earliest example of baggage hauling. Beginning in 1902, many cars designed for Evanston-Waukegan service had small baggage compartments to accommodate not only passengers' luggage but shipments of express as well. The first full express cars were also obtained and a contract was made with the Johnson Express Company. For a time the United States Express Company handled the traffic, and later the contract was with Adams Express, a predecessor of today's Railway Express Agency.

After that time, less-than-carload traffic was handled as a part of North Shore Line's own business under the name of Merchandise Dispatch. A solicitation force for this class of shipments was incorporated into the Traffic Department.

*See CERA Bulletin 105, "The Great Third Rail," page II-21.

Workhorse in express service was Chicago Rapid Transit Company coach converted for use as a box motor and leased for a while to North Shore Line to handle peak loads. Unit also saw service on the Chicago & Interurban Traction Company, or "KanKaKee Line." (RHK)





Through-traffic agreements were made with the interurban and steamship lines connecting at Milwaukee. In the case of the Milwaukee Northern Railway, actual interchange of interurban equipment was involved. Other through routings involved the more customary transshipment of packages from one vehicle to another.

The merchandise dispatch service was keyed to movement of articles of a few hundred pounds or less at the fastest possible speeds. Same-day delivery was customary at any point on North Shore Line. Ports on the eastern shore of Lake Michigan enjoyed next-day delivery from Evanston and 48-hour service to Detroit was apparently achieved occasionally. The latter moves required end-to-end connections of the North Shore Line, a steamship company, the Grand Rapids Grand Haven & Muskegon Railway Company, Michigan Railway, and Detroit United Railway.

The aftermath of a sleet storm in Wisconsin early in 1922 gave North Shore Line a chance to display its ability in making an extra-fast special movement. At noon an inquiry was received from the Western Electric Company, whose stocks were to replace telephone cables destroyed in the storm. The cable was dispatched to North Shore Line and a car sent out extra as soon as loaded. By 4 PM, telephone crews in Milwaukee were unloading the cable and departing for job sites.

THE VOLUME OF BUSINESS INCREASES

With entry of the United States into World War I less than a year after the North Shore Line reorganization, freight services of the steam railroads were taxed to capacity and small movements were often delayed. Concentrating as they did on less-than-carload (LCL) traffic, North Shore Line and its interurban connections were able to maintain normal service.

As the business built up, the original few converted passenger cars and a few cars leased from the Chicago "L" lines proved inadequate. In 1919 the first new baggage cars, numbers 203 to 214, were obtained. Traffic eventually reached the point where 37 merchandise dispatch units of this type were being operated, in addition to seven all-steel baggage-passenger cars handling packages on passenger trains.

On-line facilities, too, saw construction and enlargements throughout the years. In some cases the railway had relied on direct loading from wagons into the baggage compartments of its cars and, of course, the smallest of shipments could be handled by agents in passenger stations. Separate freight houses became a necessity, however, and were established as needed. An attractive brick building was, for example, constructed at 6th & Clybourn at Milwaukee about 1917. More typical frame structures sprang up at each principal town, particularly on the north end of the line.

TERMINAL PROBLEMS ARE OVERCOME

It was impracticable to bring LCL freight to and from downtown Chicago over the "L" tracks, though this route proved to be no obstacle to the handling of baggage, newspapers, and small parcels. Consequently a Chicago freight house was established in 1919 as part of the contract for trackage rights over the "L." This facility was located at Montrose Avenue, on the property of the Wilson Avenue "L" yards about seven miles north of the Loop area.

The necessity of delivering LCL to a location so remote from the centers of manufacturing in Chicago made it difficult to compete with the steam railroads, whose facilities were customarily located in the light industrial areas on the fringes of the central business district. Hence North Shore Line opened a second freight terminal just north of the central area. Although located on "L" property, this location had no rail loading facilities. Established instead was an operation of North Shore Line trucks which carried LCL from here to the Montrose Avenue location for loading into merchandise dispatch cars.

In addition to the freight house at the downtown location, truck terminals were established at a few locations where the financially related "L" lines had unused real estate available and where there was potential of LCL traffic for or from nearby commercial or industrial areas. These terminals also handled some LCL for the Chicago Aurora & Elgin Railroad, although most traffic handled through them was that of the North Shore Line. Typical locations were at 40th & Union, on the site of a proposed "L" coach yard near the Chicago Stock Yards, and on a maternal yard property convenient to the Hawthorne industrial district in suburban Cicero, Illinois. Another LCL terminal, at 63rd & Calumet along the South Side "L," apparently had some direct rail service provided by the newspaper cars which were stored there between trips.

The expense of transferring lading from truck to rail at Montrose Avenue was a problem that remained unsolved until 1926, when opening of the railway's new Skokie Valley Route permitted establishment of a combined truck-rail service that lasted longer than any other "piggyback" operation has at the time of this writing.

EARLY CARLOAD FREIGHT MOVEMENTS

The Chicago & Milwaukee Electric originally followed the trend among the longer street railways of its time by concentrating on passenger and some baggage movement. In the earliest years there was no desire to develop carload freight hauling, and the franchises granted by the towns south of Highland Park specifically prohibited this class of commerce.

As the line grew northward and began to assume a few of the characteristics of a railroad, it became expedient to tap a few quarries and gravel pits. The first was probably the pit at Liberty Lake which was contacted during construction of the Libertyville Branch, but there was also a sand and stone quarry a few miles north of Racine and a pit at Beebe (now Klinkert Road), a few miles south of the same town.

Materials from such sources were used by the railway in construction, especially on the Milwaukee Division where the rolling countryside required large amounts of earthwork. It appears, though, that small amounts of stone and sand were carried for commercial on-line users where that was convenient.

Coal used for generating electricity in the steam plant at Highwood was moved from an interchange with the Chicago Milwaukee & St. Paul Railway at Rondout. The desire to haul coal for heating a hospital in Waukegan was a factor in constructing the Glen Flora extension of the Waukegan city lines in 1917 and 1918. By this route, locomotives and short trains could reach the hospital site without having to negotiate the more crowded downtown streets or the prohibitively sharp curves there.

Another hoped-for freight line would have contacted a growing industrial district along the northern lakefront of Waukegan. A complete right-of-way running along the east side of the Chicago & North Western Railway line near the lakefront between Waukegan and Winthrop Harbor and connecting with the Milwaukee Division near that town was actually purchased. No construction was ever undertaken, although the railway continues to hold the land.

During the sugar shortage of World War I, some interchange was begun under individual contract with the CM&StP. That railroad turned over standard gondolas to North Shore Line at Racine, from where they were taken to various on-line rural sidings for sugar beet loading. Mills in Madison and Menominee, Wisconsin, and in downstate Illinois were the destinations for these movements.

Other agricultural products were shipped over the years despite strong opposition from some of the steam railroads which also served territory tributary to North Shore Line. On one occasion, a car of cabbages is said to have been interchanged from North Shore as far as Kansas City. The spreading of paved roads into rural territory was, of course, a principal cause of the early decline in such traffic on the line.

The day of regular interchange of freight cars as a uniform part of the general railroad network came to North Shore Line only after completion of its new Skokie Valley Route in 1926.

The Electrical System

BION J. ARNOLD ENTERS THE PICTURE

Power for the original Bluff City Electric operations in Waukegan and North Chicago was purchased locally, as commercial electricity in small quantities was generally available in the territory by the late 1890's. As planning for the extension south toward Highland Park advanced, however, it became clear that another power source should be developed.

At this point the advice of Bion Joseph Arnold, a consultant in electric railway construction even in those early days, was sought. Plans which he had originally drawn for a proposed interurban line northwest of Chicago were adapted to the Chicago & Milwaukee Electric situation. Thus the high-voltage alternating-current transmission system, with substations along the railway for converting AC to direct current at trolley voltage, came to the Chicago area. It is reported that substations had been used in commercial power transmission, but never before as a method of powering parts of a railway distant from the generating station.

The application to the Chicago & Milwaukee Electric called for power generating at Highwood, near the center of the Evanston-Waukegan line which would eventually have to be supplied, with a rotary-converter substation located eight miles away in each direction.

Franchises called for the system to be operating within ninety days of its authorization—an extremely short time for installation of an untried method. However, it was possible to obtain three experimental 120-kilowatt rotaries from the General Electric Company. Two of these were driven by steam engines at the local electric company's power plant north of Elm Place, Highland Park. These two rotaries thus served as generators. One supplied 500-volt DC directly to the trolley, while the other generated 25-cycle AC which was then stepped up to 5000 volts for transmission to the third rotary. This was located at a substation in North Chicago to feed the north end of the line.

THE PERMANENT MACHINERY ARRIVES

By the following spring, the permanent machinery had arrived to replace the three rotaries borrowed from General Electric. On June 20, 1899, Arnold had the entire Evanston-Waukegan line powered as planned. This involved generating power at Highwood. The one engine installed there drove two generators, a 250-kilowatt

model which transmitted 25-cycle AC at 5500 volts to the outlying locations and a 225-kilowatt machine feeding 600-volt DC directly into the trolley wire. A substation was also constructed at Winnetka to handle demand on the Evanston extension. The transmission voltage was fixed at 5500 volts since General Electric was then unable to supply machinery for any higher voltage.

Storage batteries were introduced in each substation to reduce the necessary size of the converters, for the batteries could be charged between trains and then called on to supply a part of the peak demand as trains were accelerating in the vicinity.

While the idea of transmitting at a pressure higher than the trolley voltage was startling at the time, it was soon adopted widely and within a few years had become the standard throughout the country.

Power demand on the Chicago & Milwaukee Electric increased along with traffic. The 250-kilowatt generating capacity at Highwood was increased to 750 kilowatts with addition of a new steam engine in 1900. One engine blew up in 1903 and severely limited train operations by its absence. Generating capacity was, however, enlarged even after replacement of the damaged machinery, for by 1904 the Highwood plant could supply 2250 kilowatts. In addition to powering the railroad, the plant supplied waste steam to the radiators in the office building.

The 1904 addition to the Highwood power plant included the first 13,200-volt generator. At the same time, step-up transformers were installed so that the older generators could also feed the 13,200-volt line. The substation converters designed for the 5500-volt input were replaced—in the case of the North Chicago substation, by new machines in a new substation building directly adjacent to the carbarn.

At this time the Milwaukee Division was under construction. It was planned to construct a new power plant at Waukegan to eliminate unnecessarily long feeding distances. The proposed plant would utilize turbines instead of the customary reciprocating engines. As a preliminary, the railway borrowed a million-watt steam turbine from General Electric. This was installed in the rear of the Highwood carbarn. However, operation of the turbine in parallel with older equipment did not prove successful and no additional turbine installations were made by the railway. In fact, the whole idea of constructing a power plant at Waukegan was dropped.

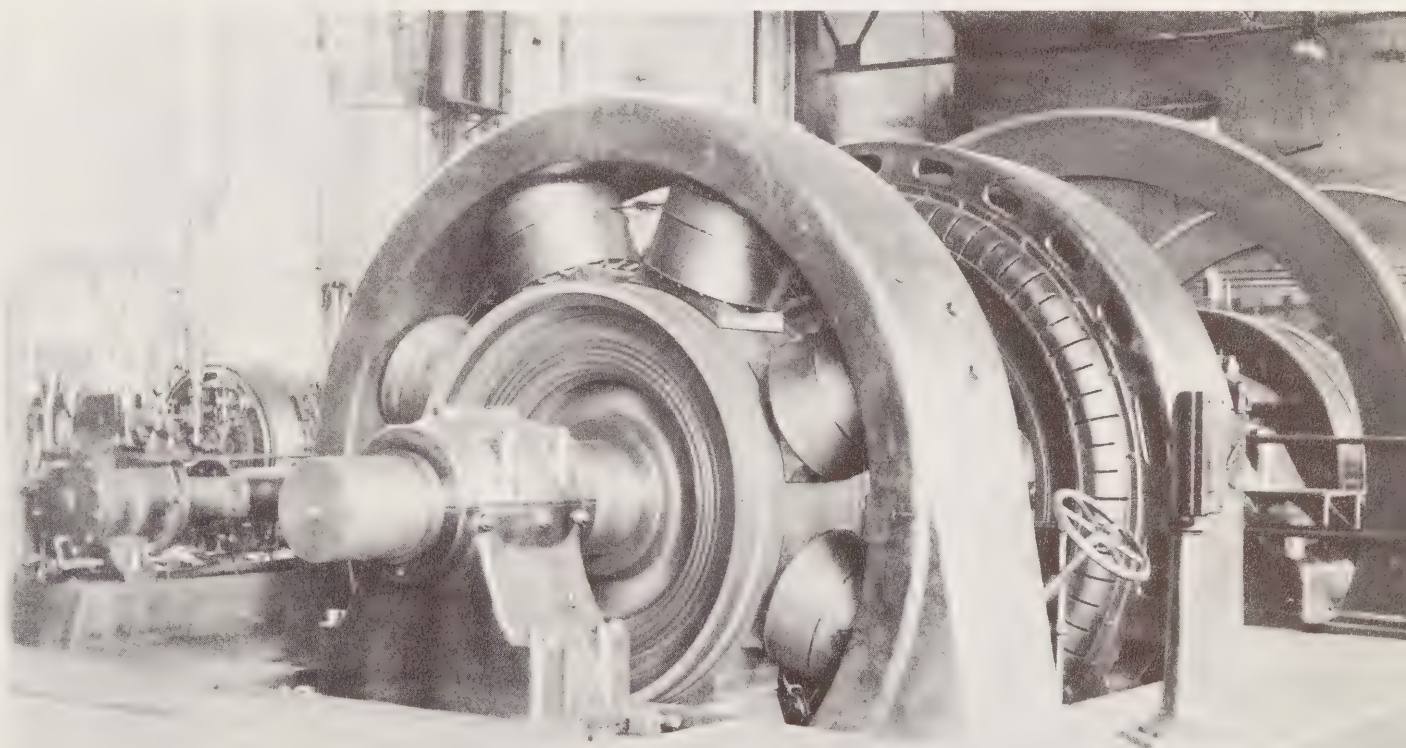
Expansion to the north suggested still higher transmission voltages. North of North Chicago all transmission was at 30,000 volts; the Milwaukee Division substations were equipped for input at that pressure. The break in transmission voltage was accomplished by 13,200/30,000-volt step-up transformers placed in the North Chicago substation.

Purchase of electricity was resumed on June 1, 1907, due to the increase in traction power requirements and the ineffectiveness of the steam turbine at Highwood. A new 13,200-volt transmission line was constructed to tie the North

Shore Electric Company to the railway at Winnetka. Thereafter 1500 kilowatts was obtained from that source. Two years later the railway began purchasing power for the north end of the line from The Milwaukee Electric Railway & Light Company. Temporarily DC was furnished; but as soon as an underground transmission cable could be installed, this was changed to 13,200-volt AC stepped up at Harrison Street to 30,000 volts. Power was later obtained from the North Shore Electric Company at Waukegan and at Evanston as well as at Winnetka.

On May 1, 1913, the Highwood power plant was leased to the Public Service Company of Northern Illinois, the Insull-dominated successor to the North Shore Electric Company. Generating at Highwood continued for a few years but became increasingly uneconomical and was eventually given up. The equipment was finally sold for scrap in 1929.

Highwood power plant is seen in action about 1912, with DC generator in foreground and AC machine behind. (PS)



Substations — 1916

Name	Miles of interurban line nearer this point than next nearest substation	Rotary converters and year installed	Kilowatt output
Milwaukee	7	2-1000 KW (1908)*	2000
Carrollville	9	2-500 KW (1908)*	1000
Racine	13	2-500 KW (1906)*	1000
Kenosha (now McKeon)	13	2-500 KW (1905)*	1000
North Chicago	15	{ 1-300 KW (1904) 1-500 KW (1907) 1-500 KW (1914) }	1300
Highwood	8	{ 2-300 KW (1904) 1-500 KW (1909) }	1100
Winnetka	8	{ 2-500 KW (1904) 1-500 KW (1907) }	1500
Libertyville	8	2-300 KW (1904)	600
Total—8 substations	81		9500
*33,000 volts AC input; others 13,200 volts.			Source: PS

At the time of Insull takeover, eight substations (at left) fed the line. Immediately after 1916, however, the number increased rapidly.

MORE POWERFUL SUBSTATIONS EVOLVE

Substation operations through the years also tell an interesting story. One or two 600-volt equalizing batteries each capable of delivering 640 ampere hours were installed according to the Arnold system at Carrollville, Racine, McKeon, North Chicago, Highwood, and Winnetka substations. These proved inefficient and costly to maintain as they aged and were discontinued one by one. A description of them from the Byllesby report of 1912 is indicative of the problems that faced the line's electrical department:

[The substations] were originally equipped, and are still partly operated with storage batteries. These batteries are of various capacities. They have depreciated since they have been installed to the extent that their use has been abandoned entirely at Highwood and Winnetka, while in the balance of the substations hardly 50% of their capacity can be utilized. . . . The battery [at Winnetka] was installed and put in service in 1903, repaired in 1906, and was taken out of service in 1908, all of the positive plates being used up.

Capacity of substations increased gradually to a total output of 9500 kilowatts, as shown in the accompanying table, before the Insull management takeover. The heavier cars and higher speeds planned by this management demanded further increases in substation capacity. These were accomplished partly by providing larger converters in existing substations. More prominent in the program, however, was installation of new substation locations. It was decided to establish eventually a spacing of only $3\frac{1}{2}$ to $4\frac{1}{2}$ miles between substations.

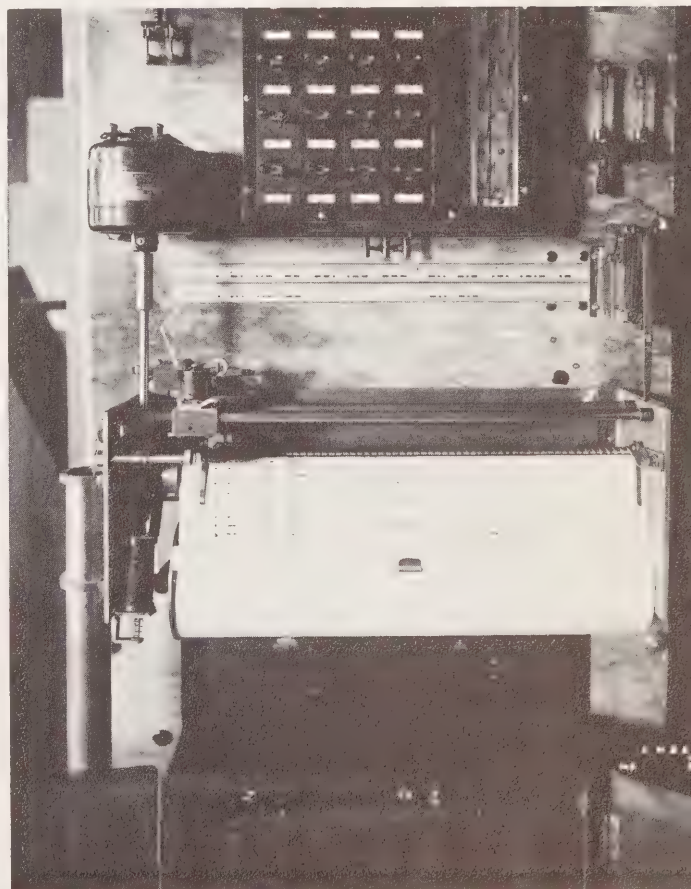
A portable substation was built and put in service at various locations where power demand was high or there was a large interstation spacing. This machine had a capacity of 1000 kilowatts and was first used at Lake Bluff in July 1917. By 1925 the most critical needs had been met and the portable sub was then retired.

Automatic control apparatus was first introduced on one of the rotary converters at Winnetka substation in 1917. At each new substation location, completely automatic control was used to avoid altogether the need for an attendant. Thus North Shore Line was again one of the first railways to use a new electrical development, for the pioneer automatic substation on



An important substation was located next to the North Chicago carbarn and supplied much of the power for operations in the Waukegan area. Circa 1908. (GK)

Supervisory control board that was installed at Milwaukee substation is shown (below) during a preliminary trial. Dot-dash code informs operator of each action at the fully automatic College and Carrollville substations.



Bion J. Arnold's Elgin Belvidere & Rockford Railway had not been in service long.

At first, the completely automatic substations were located between pairs of existing manual subs for relief in event of failure of the automatic control facilities. Dependability proved to be more than adequate, however, and this rule was soon waived.

Beginning in 1921, new substations in Illinois were equipped for 60-cycle instead of 25-cycle AC input to help meet coming patterns in commercial power. Ravinia was the first 60-cycle installation. After this time, some 25-cycle Wisconsin substations were opened, but in each case with rotary converter equipment released from some point where larger machines had been installed or new 60-cycle equipment had replaced older rotaries.

A device was developed by North Shore Line personnel to permit monitoring the action of automatic substations from a remote point. Sending apparatus was installed initially, in 1925, at the Carrollville and College Avenue substations near Milwaukee. Each operation required to start or shut down the substation was given a code which could be automatically transmitted to a recording panel at the Milwaukee sub, where the operator supervised the reports.

ROSTER OF NORTH SHORE EQUIPMENT

(See Notes, Page 84)

CAR NUMBER	ORIGINAL BUILDER	BUILT	TRUCKS	MOTORS	MASTER CONTROLLER	WEIGHT	SEATS	LENGTH OVERALL	WIDTH OVERALL	HEIGHT OVER ROOF	IN SERVICE	OUT OF SERVICE	REBUILT, SOLD OR RETIRED	REMARKS	DETAILS ON PAGE	
WOODEN CITY CARS																
Two Cars			Single											Two secondhand cars used in Waukegan. No other information.	--	
1	Brill	'98	Brill 21	2-GE52				27'-10"	7'-10"	11'-0"				Cars 1-3 originally used in Waukegan. #1 rebuilt 1903 to line car.	84-85	
2-3	Brill	'98	Brill 21	2-GE52				27'-10"	7'-10"	11'-0"				Believed sold to the Kenosha Electric Railway Co.	84-85	
4	Brill	'98	Brill 21	2-GE52				27'-10"	7'-10"	11'-0"				Originally used south of N. Chicago Jct. Rebuilt to work car.	84-85	
12	St. Louis	'00	Brill 21					28'-11"						Four cars rebuilt 1901 to coaches #7-8. Others probably sold.	84-85	
40-42	St. Louis	'00		None	None									Six single-truck open cars. Some retired after 1910.	84-85	
50	St. Louis	'09	McGuire-Cummings 20A	4-GE216A	GE-K28F	52,000	58	49'-2"	8'-5"	12'-2"	5/	09	'14	'18	Cars 500-509 used in Milwaukee until 1923, thereafter in Waukegan. #500 made one-man 11/5/23. Sold for scrap.	86-89
501	St. Louis	'09	McGuire-Cummings 20A	4-GE216A	GE-K28F	58,000	52	49'-2"	8'-5"	12'-2"	5	09	'14	'18	Two-man car. Sold for scrap.	86-89
502	St. Louis	'09	McGuire-Cummings 20A	4-GE216A	GE-K28F	52,000	58	49'-2"	8'-5"	12'-2"	5/	09	'14	'18	Made one-man 7/29/24. Sold for scrap.	86-89
503	St. Louis	'09	McGuire-Cummings 20A	4-GE216A	GE-K28F	58,000	52	49'-2"	8'-5"	12'-2"	5	09	'14	'18	Two-man car.	86-89
504	St. Louis	'09	McGuire-Cummings 20A	4-GE216A	GE-K28F	52,000	58	49'-2"	8'-5"	12'-2"	5	09	'14	'18	Made one-man 5/13/24. Sold for scrap.	86-89
505	St. Louis	'09	McGuire-Cummings 20A	4-GE216A	GE-K28F	58,000	52	49'-2"	8'-5"	12'-2"	5/	09	'14	'18	Two-man car.	86-89
506	St. Louis	'09	McGuire-Cummings 20A	4-GE216A	GE-K28F	58,000	52	49'-2"	8'-5"	12'-2"	5	09	'14	'18	Two-man car. Sold for scrap.	86-89
507	St. Louis	'09	McGuire-Cummings 20A	4-GE216A	GE-K28F	52,000	58	49'-2"	8'-5"	12'-2"	5	09	'14	'18	Made one-man 3/11/22.	86-89
508	St. Louis	'09	McGuire-Cummings 20A	4-GE216A	GE-K28F	58,000	52	49'-2"	8'-5"	12'-2"	5	09	'14	'18	Two-man car. Sold for scrap.	86-89
509	St. Louis	'09	McGuire-Cummings 20A	4-GE216A	GE-K28F	52,000	58	49'-2"	8'-5"	12'-2"	5	09	'14	'18	Made one-man 11/5/22. Used as waiting room at 10th St., I.C.	86-89
STEEL CITY CARS																
313	St. Louis	'15	Baldwin 54-182	2-GE200J	GE-K35J	34,500	42	37'-6"	8'-6"	11'-7"	7/2/18	'14	'15	Acquired 6/1918 from Empire State Railway. Made one-man 3/12/19. Sold for scrap.	90-91	
315	St. Louis	'15	Baldwin 54-182	2-GE200J	GE-K35J	34,500	42	37'-6"	8'-6"	11'-7"	7/2/18	'14	'15	Acquired 6/1918 from Empire State Railway. Made one-man 2/24/19. Sold for scrap.	90-91	
316	Cincinnati	'20	Cincinnati 139C	2-GE264A	2-GE K63	17,000	32	27'-9"	8'-0"	8'-11"	2/3/20	'13	'18	Birneys 316-325 used mostly in Waukegan. Sold for scrap.	91-93	
317	Cincinnati	'20	Cincinnati 139C	2-GE264A	2-GE K63	17,000	32	27'-9"	8'-0"	8'-11"	2/10/20	'13	'18		91-93	
318	Cincinnati	'20	Cincinnati 139C	2-GE264A	2-GE K63	17,000	32	27'-9"	8'-0"	8'-11"	2/10/20	'13	'18		91-93	
319	Cincinnati	'20	Cincinnati 139C	2-GE264A	2-GE K63	17,000	32	27'-9"	8'-0"	8'-11"	2/10/20	'13	'18		91-93	
320-321	Cincinnati	'20	Cincinnati 139C	2-GE264A	2-GE K63	17,000	32	27'-9"	8'-0"	8'-11"	2/3/20	'13	'18		91-93	
322	Cincinnati	'20	Cincinnati 139C	2-GE264A	2-GE K63	17,000	32	27'-9"	8'-0"	8'-11"	2/18/20	'13	'18		91-93	
323	Cincinnati	'20	Cincinnati 139C	2-GE264A	2-GE K63	17,000	32	27'-9"	8'-0"	8'-11"	2/3/20	'13	'18		91-93	
324	Cincinnati	'20	Cincinnati 139C	2-GE264A	2-GE K63	17,000	32	27'-9"	8'-0"	8'-11"	2/10/20	'13	'18		91-93	
325	Cincinnati	'20	Cincinnati 139C	2-GE264A	2-GE K63	17,000	32	27'-9"	8'-0"	8'-11"	2/3/20	'14	'18		91-93	
326	Cincinnati	'23	Cincinnati 139C	2-GE264A	2-GE K63	18,700	38	29'-6"	8'-1"	10'-0"	1/18/23	'14	'18	Birneys 326-330 used in Milwaukee until 1933. Thereafter in Waukegan. Sold for scrap.	93	
327	Cincinnati	'23	Cincinnati 139C	2-GE264A	2-GE K63	18,700	38	29'-6"	8'-1"	10'-0"	1/18/23	'14	'18		93	
328	Cincinnati	'23	Cincinnati 139C	2-GE264A	2-GE K63	18,700	38	29'-6"	8'-1"	10'-0"	1/18/23	'14	'18		93	
329	Cincinnati	'23	Cincinnati 139C	2-GE264A	2-GE K63	18,700	38	29'-6"	8'-1"	10'-0"	1/18/23	'14	'18		93	
330	Cincinnati	'23	Cincinnati 139C	2-GE264A	2-GE K63	18,700	38	29'-6"	8'-1"	10'-0"	1/18/23	'14	'18		93	
331-337	Cincinnati	'23	Cincinnati 139C	2-GE264A	2-GE K63	18,700	38	29'-6"	8'-1"	10'-0"	1/18/23	'14	'18	Birneys used in Milwaukee. Sold for scrap.	93	
351	St. Louis	'27	St. Louis E1B64	4-GE265J4	2-GE K35KK	46,000	56	51'-0"	8'-4"	11'-6"	12/23/27	'19	'50	Cars 351-358 used in Milwaukee until 1942, thereafter in Waukegan until 1947, then in Milwaukee. Sold for scrap.	93	
352	St. Louis	'28	St. Louis E1B64	4-GE265J4	2-GE K35KK	46,000	56	51'-0"	8'-4"	11'-6"	1/12/28	'51	'51		93	
353	St. Louis	'28	St. Louis E1B64	4-GE265J4	2-GE K35KK	46,000	56	51'-0"	8'-4"	11'-6"	1/14/28	'51	'51		93	
354	St. Louis	'28	St. Louis E1B64	4-GE265J4	2-GE K35KK	46,000	56	51'-0"	8'-4"	11'-6"	1/17/28	'51	'51	Resold to CHP Co. Now being restored by Illinois Railway Museum.	93	
355	St. Louis	'28	St. Louis E1B64	4-GE265J4	2-GE K35KK	46,000	56	51'-0"	8'-4"	11'-6"	1/26/28	'51	'51		93	
356	St. Louis	'28	St. Louis E1B64	4-GE265J4	2-GE K35KK	46,000	56	51'-0"	8'-4"	11'-6"	1/24/28	'51	'51		93	
357	St. Louis	'28	St. Louis E1B64	4-GE265J4	2-GE K35KK	46,000	56	51'-0"	8'-4"	11'-6"	1/25/28	'49	'50		93	
358	St. Louis	'28	St. Louis E1B64	4-GE265J4	2-GE K35KK	46,000	56	51'-0"	8'-4"	11'-6"	1/30/28	'48	'50		93	
359	St. Louis	'28	St. Louis E1B64	4-GE265J4	2-GE K35KK	46,000	56	51'-0"	8'-4"	11'-6"	2/1/28	'49	'50	Cars 359, 360 used in Waukegan until 1947, thereafter in Milwaukee. Sold for scrap.	93	
360	St. Louis	'28	St. Louis E1B64	4-GE265J4	2-GE K35KK	46,000	56	51'-0"	8'-4"	11'-6"	2/2/28	'51	'51		93	
361	St. Louis	'27	St. Louis E1B64	4-GE267	2-GE K35FP	50,800	56	51'-0"	8'-4"	11'-6"	6/10/42	'47	'48	Leased 6/1942 from CA&E RR. CA&E number was #500. Purchased 3/1947. Sold for scrap.	93	

Details of cars 351-361 will appear in CERA Bulletin 107.

Details of cars 351-361 will appear in C&E Bulletin 107.

CAR NUMBER	ORIGINAL BUILDER	BUILT	TRUCKS	MOTORS	MASTER CONTROLLER	WEIGHT	SEATS	LENGTH OVERALL	WIDTH OVERALL	HEIGHT OVER ROOF	IN SERVICE	OUT OF SERVICE REBUILT, SOLD OR RETIRED	REMARKS	DETAILS ON PAGE
WOODEN INTERURBAN COACHES														
7	C&M Ry	'01	Brill 27A1	4-GE57	2-GE K14		44	45'-4"	8'-0"	11'-10"		'12	Car built at Highwood shops using two car bodies of 2-12 class.	44
8	C&M Ry	'01	Curtis	4-GE57	2-GE K14		44	45'-4"	8'-0"	11'-10"		'16	Same as above	44
9	Pullman	'99	Brill 27D	4-GE57	2-GE K14		40	37'-9"	7'-8"	12'-1"	3/ /99	'13	Doors on front right side only. Originally had 2 motors and Peckham 14B trucks.	44-45
10	Pullman	'99	Peckham 14B	4-GE57	2-GE K14		40	37'-9"	7'-8"	12'-1"	3/ /99	'16	Originally had 2 motors.	44-45
23-25	Jewett	'04	Brill 27A1	4-GE74	2-GE C6A	67,160	46	46'-9"	9'-3"	13'-2"		'30	'30	101
26,27	Jewett	'04	Curtis E	4-GE74	2-GE C6A	67,160	46	46'-9"	9'-3"	13'-2"		'30	'30	101
28	Jewett	'04	Brill 27A1	4-GE74	2-GE C6A	67,160	46	46'-9"	9'-3"	13'-2"		'30	'30	101
29	St. Louis	'05	St. Louis 23A	4-GE70	2-GE C6A	50,000	52	48'-2"	8'-6"	12'-5"	4/ /05	'28	'28	102-103
30	St. Louis	'05	St. Louis 23A	4-GE70	2-GE C6A	50,000	52	48'-2"	8'-6"	12'-5"	4/ /05	'22	'22	102-103
31,32	St. Louis	'05	St. Louis 23A	4-GE70	2-GE C6A	50,000	52	48'-2"	8'-6"	12'-5"	4/ /05	'22	'22	102-103
33-36	St. Louis	'05	St. Louis 23A	4-GE70	2-GE C6A	50,000	52	48'-2"	8'-6"	12'-5"	4/ /05	'22	'22	102-103
37,38	St. Louis	'05	St. Louis 23A	4-GE70	2-GE C6A	50,000	52	48'-2"	8'-6"	12'-5"	4/ /05	'23	'24	102-103
40-42	Brill	'99	Brill	None	None								14 bench open cars, sold before 1911.	-
50	Brill	'99	Brill	2-GE57	2-GE K14								Originally trailer.	-
57	Pullman	'00	Brill 27G	None	None		56	49'-1"	7'-10"	11'-8"	5/ /00	'11	14 bench open cars, sold before 1911.	-
58-61	Pullman	'00	Brill 27G	None	None		56	49'-1"	7'-10"	11'-8"	5/ /00		14 bench open cars, sold before 1911.	-
62	Stephenson	'04	Peckham 14A	None	1-GE C6A	40,000	56	52'-8"	9'-0"	12'-4"	5/ /04	'26	'26	104
63	Stephenson	'04	Brill 27A	None	1-GE C6A	40,000	56	52'-8"	9'-0"	12'-4"	5/ /04	'19	'19	104
64-66	Stephenson	'04	Brill 27A	None	1-GE C6A	40,000	56	52'-8"	9'-0"	12'-4"	5/ /04	'26	'26	104
67	Stephenson	'04	Peckham 14A	None	1-GE C6A	40,000	56	52'-8"	9'-0"	12'-4"	5/ /04	'26	'26	104
75	American	'10	McG-Cummings 70A	None	1-GE C6A	55,000	54	52'-3"	8'-7"	13'-5"	5/ /10	'28		105
76,77	American	'10	McG-Cummings 70A	None	1-GE C6A	55,000	54	52'-3"	8'-7"	13'-5"	5/ /10	'34	'37	105
78	American	'10	McG-Cummings 70A	None	1-GE C6A	55,000	54	52'-3"	8'-7"	13'-5"	5/ /10	'23	'30	105
79	American	'10	McG-Cummings 70A	None	1-GE C6A	55,000	54	52'-3"	8'-7"	13'-5"	5/ /10	'33	'37	105
80,81	American	'10	McG-Cummings 70A	None	1-GE C6A	55,000	54	52'-3"	8'-7"	13'-5"	5/ /10	'34	'37	105
82	American	'10	McG-Cummings 70A	None	1-GE C6A	55,000	54	52'-3"	8'-7"	13'-5"	5/ /10	'30	'37	105
100-103	Brill	'02	Brill 27G	None	None		56						Open interurban cars	105
117	Jewett	'06	Baldwin 295	4-GE73C	2-GE C6K	71,380	54	52'-3"	9'-1"	13'-5"	7/23/06	'30	'30	106
118	Jewett	'06	Baldwin 295	4-GE73C	2-GE C6K	71,380	54	52'-3"	9'-1"	13'-5"	9/22/06	'26	'27	106
119	Jewett	'06	Baldwin 295	4-GE73C	2-GE C6K	71,380	54	52'-3"	9'-1"	13'-5"	8/31/06	'30	'30	106
120	Jewett	'06	Baldwin 295	4-GE73C	2-GE C6K	71,380	54	52'-3"	9'-1"	13'-5"	6/7/06	'30	'30	106
121	Jewett	'06	Baldwin 295	4-GE73C	2-GE C6K	71,380	54	52'-3"	9'-1"	13'-5"	6/13/06	'30	'30	106
122	Jewett	'06	Baldwin 295	4-GE73C	2-GE C6K	71,380	54	52'-3"	9'-1"	13'-5"	7/7/06	'32	'37	106
123	Jewett	'06	Baldwin 295	4-GE73C	2-GE C6K	71,380	54	52'-3"	9'-1"	13'-5"	8/9/06	'30	'37	106
124	Jewett	'06	Baldwin 295	4-GE73C	2-GE C6K	71,380	54	52'-3"	9'-1"	13'-5"	7/11/06	'33	'37	106
125	Jewett	'06	Baldwin 295	4-GE73C	2-GE C6K	71,380	54	52'-3"	9'-1"	13'-5"	7/21/06		Renumbered #117	106
126	Jewett	'06	Baldwin 295	4-GE73C	2-GE C6K	71,380	54	52'-3"	9'-1"	13'-5"	7/6/06	'33	'37	106
127	Jewett	'06	Baldwin 295	4-GE73C	2-GE C6K	71,380	54	52'-3"	9'-1"	13'-5"	7/25/06	'33	'37	106
128	Jewett	'07	Baldwin 295	4-GE73C	2-GE C6K	76,580	54	52'-3"	8'-8"	13'-5"	7/24/07	'31	'37	107-109
129	Jewett	'07	Baldwin 295	4-GE73C	2-GE C6K	76,580	54	52'-3"	8'-8"	13'-5"	7/17/07	'46	'46	107-109
130	Jewett	'07	Baldwin 295	4-GE73C	2-GE C6K	76,580	54	52'-3"	8'-8"	13'-5"	7/10/07	'46	'46	107-109
131	Jewett	'07	Baldwin 295	4-GE73C	2-GE C6K	76,580	54	52'-3"	8'-8"	13'-5"	7/7/07		Rebuilt about 1930 to plow.	107-109
132	Jewett	'07	Baldwin 295	4-GE73C	2-GE C6K	76,580	54	52'-3"	8'-8"	13'-5"	8/2/07	'30	'30	107-109
133	Jewett	'07	Baldwin 295	4-GE73C	2-GE C6K	76,580	54	52'-3"	8'-8"	13'-5"	7/29/07	'46	'46	107-109
134	Jewett	'07	Baldwin 295	4-GE73C	2-GE C6K	76,580	54	52'-3"	8'-8"	13'-5"	7/26/07	'46	'46	107-109
135	Jewett	'07	Baldwin 295	4-GE73C	2-GE C6K	76,580	54	52'-3"	8'-8"	13'-5"	7/18/07	'30	'30	107-109
136	Jewett	'07	Baldwin 295	4-GE73C	2-GE C6K	76,580	54	52'-3"	8'-8"	13'-5"	8/5/07	'30	'30	107-109
137	Jewett	'07	Baldwin 295	4-GE73C	2-GE C6K	76,580	54	52'-3"	8'-8"	13'-5"	8/5/07	'46	'46	110
138,139	American	'10	McG-Cummings 70A	4-GE73C	2-GE C6K	75,000	52	52'-3"	8'-8"	13'-5"	5/ /10	'46	'46	110
140	American	'10	McG-Cummings 70A	4-GE73C	2-GE C6K	75,000	52	52'-3"	8'-8"	13'-5"	5/ /10	'46	'46	110
141	American	'10	McG-Cummings 70A	4-GE73C	2-GE C6K	75,000	52	52'-3"	8'-8"	13'-5"	5/ /10	'46	'46	110

CAR NUMBER	ORIGINAL BUILDER	BUILT	TRUCKS	MOTORS	MASTER CONTROLLER	WEIGHT	SEATS	LENGTH OVERALL	WIDTH OVERALL	HEIGHT OVER ROOF	IN SERVICE	OUT OF SERVICE	REBUILT, SOLD OR RETIRED	REMARKS	DETAILS ON PAGE
WOODEN INTERURBAN COACHES (Continued)															
300	Jewett	'09	Baldwin 295	4-GE730	2-JE 3-K	74,300	54	52'-2"	21'-2"	13'-1"	3/8/09	'12	'17	See #401-403, used on North Shore line with coach numbers in 100's. Rebuilt 1936 to sleet cutter. Again coach and leased to CE&A after 1949.	117-120
301	Jewett	'09	Baldwin 295	4-GE730	2-JE 3-K	74,300	54	52'-2"	21'-2"	13'-1"	2/10/09	'13	'40	Rebuilt 1936 to sleet cutter.	114-115
302	Jewett	'09	Baldwin 295	4-GE730	2-JE 3-K	74,300	54	52'-2"	21'-2"	13'-1"	2/24/09	'13	'40	Rebuilt 1936 to sleet cutter.	113-115
303-304	American	'10	Baldwin 454	4-GE730	2-JE 3-K	74,720	54	52'-2"	21'-2"	13'-1"	5/1/10	'13	'40	Rebuilt 1936 to sleet cutters.	116
305	Jewett	'09	Baldwin 295	4-GE730	2-JE 3-K	74,300	54	52'-2"	21'-2"	13'-1"		'13	'39	Rebuilt 11/1917 from parlor-buffet car.	117-120
306	Jewett	'09	Baldwin 295	4-GE730	2-JE 3-K	74,300	54	52'-2"	21'-2"	13'-1"		'13	'40	Rebuilt 1917 from parlor-buffet car. Leased to CA&E RR 1936 to 1945. Sold to CA&E RR 1946. CA&E number was #142.	117-120
307	Jewett	'09	Baldwin 295	4-GE730	2-JE 3-K	74,300	54	52'-2"	21'-2"	13'-1"		'13	'40	Rebuilt 1917 from parlor-buffet car. Leased to CA&E RR 1936 to 1945. Sold to CA&E RR 1946. CA&E number was #143.	117-120
308	Jewett	'09	Baldwin 295	4-GE730	2-JE 3-K	74,300	54	52'-2"	21'-2"	13'-1"		'13	'46	Rebuilt 1917 from parlor-buffet car. Leased to CA&E RR 1936 to 1945. Sold to CA&E RR 1946. CA&E number was #143.	117-120
309	American	'10	Baldwin 454	4-GE730	2-JE 3-K	74,720	54	52'-2"	21'-2"	13'-1"		'13	'46	Rebuilt 3/1918 from parlor-buffet car. Leased to CA&E RR 1936 to 1945. Sold to CA&E RR 1946. CA&E number was #144.	120

WOODEN COMBINATION COACH-BAGGAGE CARS															
11	Brill	'02	Brill 27A1	4-GE57	2-GE K14	40,000	22	34'-2"	21'-10"	11'-2"	12/02	'17	'17	Rebuilt 1917 to express trailer.	95-97
12	Brill	'02	Curtis	4-GE57	2-GE K14	40,000	22	34'-2"	21'-10"	11'-2"	12/02	'13	'10	Rebuilt 1910 to express motor car. Cars 13-22 originally had only 2 motors. #13-15 rebuilt 1910 to work cars.	98-100
13-15	Pullman	'00	Brill 27A1	4-GE57	2-GE K14	40,000	22	34'-2"	21'-10"	11'-2"	1/00	'10	'10		
16	Pullman	'00	Brill 27E1	2-GE57	2-GE K14	40,000	22	34'-2"	21'-10"	11'-2"	5/00	'10	'10	Rebuilt 1910 to work car.	99-100
17	Pullman	'00	Brill 27A1	4-GE57	2-GE K14	40,000	22	34'-2"	21'-10"	11'-2"	5/00	'10	'10	Rebuilt 1910 to work car.	99-100
18	Pullman	'00	Brill 27	4-GE57	2-GE K14	40,000	22	34'-2"	21'-10"	11'-2"	5/00			Burned at Rondout, date unknown.	99-100
19	Pullman	'00	Brill 27	4-GE57	2-GE K14	40,000	22	34'-2"	21'-10"	11'-2"	5/00	'11	'11	Rebuilt 2/1911 to work car.	99-100
20	Pullman	'00	Brill 27A1	4-GE57	2-GE K14	40,000	22	34'-2"	21'-10"	11'-2"	5/00	'11	'11	Rebuilt 1911 to line car #02.	99-100
21,22	Pullman	'00	Brill 27	4-GE57	2-GE K14	40,000	22	34'-2"	21'-10"	11'-2"	5/00			Disposition unknown.	99-100
23 and one other car	Pullman	'00	Peckham 14B	2-GE57	2-GE K14									No other information. Disposition unknown.	100
200	Jewett	'09	Baldwin 295	4-GE730	2-JE 3-K	74,300	52	52'-2"	21'-2"	13'-1"	2/3/09	'17	'17	Rebuilt 1/1917 to express car.	111-112
201	Jewett	'09	Baldwin 295	4-GE730	2-JE 3-K	74,300	52	52'-2"	21'-2"	13'-1"	2/3/09	'17	'17	Rebuilt 1/1917 to express car.	111-112
202	Jewett	'09	Baldwin 295	4-GE730	2-JE 3-K	74,300	52	52'-2"	21'-2"	13'-1"	2/3/09	'17	'17	Rebuilt 1/1917 to express car.	111-112

WOODEN PARLOR-BUFFET CARS															
400	Jewett	'09	Baldwin 295	4-GE730	2-JE 3-K	74,300	29	52'-3"	21'-2"	13'-1"	2/8/09	'17	'17	Rebuilt 11/1917 to coach.	117-120
401	Jewett	'09	Baldwin 295	4-GE730	2-GE 06K	74,300	29	52'-3"	21'-2"	13'-1"	2/8/09	'17	'17	Rebuilt 1917 to coach.	117-120
402	Jewett	'09	Baldwin 295	4-GE730	2-JE 3-K	74,300	29	52'-3"	21'-2"	13'-1"	2/10/09	'17	'17	Rebuilt 1917 to coach.	117-120
403	American	'10	Baldwin 454	4-GE730	2-GE 06K	74,780	29	52'-3"	21'-2"	13'-1"	8/9/10	'18	'18	Rebuilt 3/1918 to coach.	120

CAR NUMBER	ORIGINAL BUILDER	BUILT	TRUCKS	MOTORS	MASTER CONTROLLER	WEIGHT	SEATS	LENGTH OVERALL	WIDTH OVERALL	HEIGHT OVER ROOF	IN SERVICE	DATE MODERNIZED	MADE SILVERLINER	REMARKS	DETAILS ON PAGE
STEEL INTERURBAN COACHES															
150	Brill	'15	Brill 27 MCB 3X	4-WH557A5	2-WH28A	90,280	56	56'-0"	8'-8"	12'-5"	10/30/15	--	--		121-124
151	Brill	'15	Brill 27 MCB 3X	4-WH557A5	2-WH28A	90,280	56	56'-0"	8'-8"	12'-5"	9/6/15	--	--		121-124
152	Brill	'15	Baldwin 84-30A	4-WH557A5	2-WH28A	90,280	56	56'-0"	8'-8"	12'-5"	9/5/15	--	--		121-124
153	Brill	'15	Baldwin 84-30A	4-WH557A5	2-WH28A	90,280	56	56'-0"	8'-8"	12'-5"	9/5/15	--	--	Scrapped 1952. Wrecked 4/11/51 at Mundelein. Scrapped.	121-124
154	Brill	'15	Baldwin 84-30A	4-WH557A5	2-WH28A	90,280	56	56'-0"	8'-8"	12'-5"	9/19/15	--	--		121-124
155	Brill	'15	Brill 27 MCB 3X	4-WH557A5	2-WH28A	90,280	56	56'-0"	8'-8"	12'-5"	10/19/15	--	--	Damaged in Highwood fire 8/11/52. Scrapped. See #733.	121-124
156	Brill	'15	Brill 27 MCB 3X	4-WH557A5	2-WH28A	90,280	56	56'-0"	8'-8"	12'-5"	10/19/15	--	--		121-124
157	Brill	'15	Brill 27 MCB 3X	4-WH557A5	2-WH28A	90,280	56	56'-0"	8'-8"	12'-5"	10/20/15	--	--		121-124
158	Brill	'15	Brill 27 MCB 3X	4-WH557A5	2-WH28A	90,280	56	56'-0"	8'-8"	12'-5"	10/20/15	--	--		121-124
159	Brill	'15	Brill 27 MCB 3X	4-WH557A5	2-WH28A	90,280	56	56'-0"	8'-8"	12'-5"	11/17/15	--	--		121-124
160	Brill	'15	Brill 27 MCB 3X	4-WH557A5	2-WH28A	90,280	56	56'-0"	8'-8"	12'-5"	11/13/15	--	--		121-124
161	Brill	'15	Brill 27 MCB 3X	4-WH557A5	2-WH28A	90,280	56	56'-0"	8'-8"	12'-5"	10/16/15	--	--		121-124
162	Brill	'15	Brill 27 MCB 3X	4-WH557A5	2-WH28A	90,280	56	56'-0"	8'-8"	12'-5"	10/17/15	--	--		121-124
163	Brill	'15	Brill 27 MCB 3X	4-WH557A5	2-WH28A	90,280	56	56'-0"	8'-8"	12'-5"	10/31/15	--	--		121-124
164	Brill	'15	Brill 27 MCB 3X	4-WH557A5	2-WH28A	90,280	56	56'-0"	8'-8"	12'-5"	10/17/15	--	--		121-124

CAR NUMBER	ORIGINAL BUILDER	BUILT	TRUCKS	MOTORS	MASTER CONTROLLER	WEIGHT	SEATS	LENGTH OVERALL	WIDTH OVERALL	HEIGHT OVER ROOF	IN SERVICE	DATE MODERNIZED	MADE SILVERLINER	REMARKS	DETAILS ON PAGE
STEEL INTERURBAN COACHES (Continued)															
165	Jewett	'17	Baldwin 84-30A	4- WH557A5	2-WH28A	90,280	54	56'-0"	8'-8"	12'-5"	2/18/17	--	--	Wrecked 1/24/59 at Cook-Lake Road. Scrapped.	125
166	Jewett	'17	Baldwin 84-30A	4- WH557A5	2-WH28A	90,280	54	56'-0"	8'-8"	12'-5"	5/9/17	--	--		125
167	Jewett	'17	Baldwin 84-30A	4- WH557A5	2-WH28A	90,280	54	56'-0"	8'-8"	12'-5"	3/16/17	--	--		125
168	Jewett	'17	Baldwin 84-30A	4- WH557A5	2-WH28A	90,280	54	56'-0"	8'-8"	12'-5"	3/26/17	--	--		125
169	Jewett	'17	Baldwin 84-30A	4- WH557A5	2-WH28A	90,280	54	56'-0"	8'-8"	12'-5"	2/18/17	--	--		125
170	Cincinnati	'20	Baldwin 84-34AA	4- WH557R5	2-WH28A	100,200	54	55'-3"	8'-8"	12'-8"	4/23/20	--	--		125
171	Cincinnati	'20	Baldwin 84-34AA	4- WH557R5	2-WH28A	100,200	54	55'-3"	8'-8"	12'-8"	3/18/20	--	--		125
172	Cincinnati	'20	Baldwin 84-34AA	4- WH557R5	2-WH28A	100,200	54	55'-3"	8'-8"	12'-8"	10/11/20	--	--		125
173	Cincinnati	'20	Baldwin 84-34AA	4- WH557R5	2-WH28A	100,200	54	55'-3"	8'-8"	12'-8"	10/1/20	--	--		125
174	Cincinnati	'20	Baldwin 84-34AA	4- WH557R5	2-WH28A	100,200	54	55'-3"	8'-8"	12'-8"	3/21/20	--	--		125
175	Cincinnati	'20	Baldwin 84-34AA	4- WH557R5	2-WH28A	100,200	54	55'-3"	8'-8"	12'-8"	11/12/20	--	--		125
176	Cincinnati	'20	Baldwin 84-34AA	4- WH557R5	2-WH28A	100,200	54	55'-3"	8'-8"	12'-8"	10/23/20	--	--		125
177	Cincinnati	'20	Baldwin 84-34AA	4- WH557R5	2-WH28A	100,200	54	55'-3"	8'-8"	12'-8"	11/1/20	--	--		125
178	Cincinnati	'20	Baldwin 84-34AA	4- WH557R5	2-WH28A	100,200	54	55'-3"	8'-8"	12'-8"	10/11/20	--	--		125
179	Cincinnati	'20	Baldwin 84-34AA	4- WH557R5	2-WH28A	100,200	54	55'-3"	8'-8"	12'-8"	11/13/20	--	--		125
180	Cincinnati	'20	Baldwin 84-34AA	4- WH557R5	2-WH28A	100,200	54	55'-3"	8'-8"	12'-8"	11/23/20	--	--		125
181	Cincinnati	'20	Baldwin 84-34AA	4- WH557R5	2-WH28A	100,200	54	55'-3"	8'-8"	12'-8"	12/11/20	--	--		125
182	Cincinnati	'20	Baldwin 84-34AA	4- WH557R5	2-WH28A	100,200	54	55'-3"	8'-8"	12'-8"	12/11/20	--	--		125
183	Cincinnati	'20	Baldwin 84-34AA	4- WH557R5	2-WH28A	100,200	54	55'-3"	8'-8"	12'-8"	6/26/20	--	--	Originally trailer.	125
184	Cincinnati	'20	Baldwin 84-34AA	4- WH557R5	2-WH28A	100,200	54	55'-3"	8'-8"	12'-8"	6/9/20	--	--	Originally trailer, motorized 1925.	125
185	Cincinnati	'20	Baldwin 84-34AA	4- WH557R5	2-WH28A	100,200	54	55'-3"	8'-8"	12'-8"	5/23/20	--	--		125
186	Cincinnati	'20	Baldwin 84-34AA	4- WH557R5	2-WH28A	100,200	54	55'-3"	8'-8"	12'-8"	6/21/20	--	--		125
187	Cincinnati	'20	Baldwin 84-34AA	4- WH557R5	2-WH28A	100,200	54	55'-3"	8'-8"	12'-8"	7/2/20	--	--	Out of service 12/1/55.	125
188	Cincinnati	'20	Baldwin 84-34AA	4- WH557R5	2-WH28A	100,200	54	55'-3"	8'-8"	12'-8"	7/2/20	--	--	Damaged in Highwood fire 8/11/55. Scrapped.	125
189	Cincinnati	'20	Baldwin 84-34AA	4- WH557R5	2-WH28A	100,200	54	55'-3"	8'-8"	12'-8"	7/13/20	--	--	Damaged in Highwood fire 8/11/55. Scrapped.	125
190	Cincinnati	'20	Baldwin 84-34AA	4- WH557R5	2-WH28A	100,200	54	55'-3"	8'-8"	12'-8"	7/23/20	--	--	Damaged in Highwood fire 8/11/55. Scrapped.	125
191	Cincinnati	'20	Baldwin 84-34AA	4- WH557R5	2-WH28A	100,200	54	55'-3"	8'-8"	12'-8"	8/3/20	--	--		125
192	Cincinnati	'20	Baldwin 84-34AA	4- WH557R5	2-WH28A	100,200	54	55'-3"	8'-8"	12'-8"	8/1/20	--	--	Out of service 12/1/55.	125
193	Cincinnati	'20	Baldwin 84-34AA	4- WH557R5	2-WH28A	100,200	54	55'-3"	8'-8"	12'-8"	8/14/20	--	--		125
194	Cincinnati	'20	Baldwin 84-34AA	4- WH557R5	2-WH28A	100,200	54	55'-3"	8'-8"	12'-8"	8/28/20	--	--		125
195	Cincinnati	'20	Baldwin 84-34AA	4- WH557R5	2-WH28A	100,200	54	55'-3"	8'-8"	12'-8"	9/24/20	--	--	Out of service 12/1/55.	125
196	Cincinnati	'20	Baldwin 84-34AA	4- WH557R5	2-WH28A	100,200	54	55'-3"	8'-8"	12'-8"	9/1/20	--	--	Damaged in Highwood fire 8/11/55. Scrapped.	125
197	Cincinnati	'20	Baldwin 84-34AA	4- WH557R5	2-WH28A	100,200	54	55'-3"	8'-8"	12'-8"	9/1/20	--	--		125
409	Cincinnati	'23	Baldwin 84-30AA	4- WH557R5	2-WH28A	102,200	54	55'-3"	8'-8"	12'-7"	--	--	1/30/55	Rebuilt 1942 from dining car.	125
410	Cincinnati	'23	Baldwin 84-30AA	4- WH557R5	2-WH28A	102,200	54	55'-3"	8'-8"	12'-7"	--	--	--	Rebuilt 12/31/52 from parlor- observation car.	125
411	Cincinnati	'23	Baldwin 84-30AA	4- WH557R5	2-WH28A	102,200	54	55'-3"	8'-8"	12'-7"	--	--	--	Rebuilt 2/2/54 from parlor- observation car.	125
412	Cincinnati	'24	Baldwin 84-30AA	4- WH557R5	2-WH28A	102,200	54	55'-3"	8'-8"	12'-7"	--	--	--	Rebuilt 1/2/55 from parlor- observation car.	125
413	Cincinnati	'24	Baldwin 84-30AA	4- WH557R5	2-WH28A	102,200	54	55'-3"	8'-8"	12'-7"	--	--	--	Rebuilt 5/29/55 from parlor- observation car.	125
414	Cincinnati	'24	Baldwin 84-30AA	4- WH557R5	2-WH28A	102,200	54	55'-3"	8'-8"	12'-7"	--	--	--	Rebuilt as trailer from dining car 3/4/42. Damaged in Highwood fire 8/11/55. Scrapped.	125
416	Cincinnati	'24	Baldwin 84-30AA	4- WH557R5	2-WH28A	102,200	54	55'-3"	8'-8"	12'-7"	--	--	--	Rebuilt 1/27/42 from dining car. Damaged in Highwood fire 8/11/55. Scrapped.	125
420	Fullman	'28	Baldwin 84-30AA	4- WH557R5	2-WH28A	98,000	58	55'-3"	8'-8"	12'-7"	--	--	--	Rebuilt 1944 from parlor- observation car.	125
510-511	Cincinnati	'23	Arch Bar	4- WH514A	2-WH28E	40,500	51	47'-2"	8'-6"	10'-5"	5/2/23	--	--	Lightweight cars for Mundel- ein branch. Scrapped 1940.	125
700	Cincinnati	'23	Baldwin 84-30AA	4- WH557R5	2-WH28A	100,200	56	55'-3"	8'-8"	12'-7"	5/18/23	--	--		125
701	Cincinnati	'23	Baldwin 84-30AA	4- WH557R5	2-WH28A	100,200	56	55'-3"	8'-8"	12'-7"	5/21/23	--	--		125
702	Cincinnati	'23	Baldwin 84-30AA	4- WH557R5	2-WH28A	100,200	56	55'-3"	8'-8"	12'-7"	5/21/23	--	--		125
703	Cincinnati	'23	Baldwin 84-30AA	4- WH557R5	2-WH28A	100,200	56	55'-3"	8'-8"	12'-7"	5/18/23	--	--		125
704	Cincinnati	'23	Baldwin 84-30AA	4- WH557R5	2-WH28A	100,200	56	55'-3"	8'-8"	12'-7"	5/23/23	--	--		125
705	Cincinnati	'23	Baldwin 84-30AA	4- WH557R5	2-WH28A	100,200	56	55'-3"	8'-8"	12'-7"	5/2/23	--	--		125
706	Cincinnati	'23	Baldwin 84-30AA	4- WH557R5	2-WH28A	100,200	56	55'-3"	8'-8"	12'-7"	5/2/23	--	--		125
707,708	Cincinnati	'24	Baldwin 84-30AA	4- WH557R5	2-WH28A	102,300	56	55'-3"	8'-8"	12'-7"	4/23/24	--	--		125
709	Cincinnati	'24	Baldwin 84-30AA	4- WH557R5	2-WH28A	102,300	56	55'-3"	8'-8"	12'-7"	4/25/24	--	--		125

CAR NUMBER	ORIGINAL BUILDER	BUILT	TRUCKS	MOTORS	MASTER CONTROLLER	WEIGHT	SEATS	LENGTH OVERALL	WIDTH OVERALL	HEIGHT OVER ROOF	IN SERVICE	DATE MODERNIZED	MADE SILVERLINER	REMARKS	DETAILS ON PAGE
STEEL INTERURBAN COACHES (Continued)															
710	Cincinnati	'24	Baldwin 84-30AA	4-WH557R5	2-WH28A	102,300	56	55'-3"	8'-8"	12'-7"	4/29/24	--	--		122- 130
711	Cincinnati	'24	Baldwin 84-30AA	4-WH557R5	2-WH28A	102,300	56	55'-3"	8'-8"	12'-7"	4/19/24	--	--		122- 130
712	Cincinnati	'24	Baldwin 84-30AA	4-WH557R5	2-WH28A	102,300	56	55'-3"	8'-8"	12'-7"	5/1/24	'40	--		122- 130
713	Cincinnati	'24	Baldwin 84-30AA	4-WH557R5	2-WH28A	102,300	56	55'-3"	8'-8"	12'-7"	5/2/24	'40	--		122- 130
714	Cincinnati	'24	Baldwin 84-30AA	4-WH557R5	2-WH28A	102,300	56	55'-3"	8'-8"	12'-7"	5/10/24	'40	--		122- 130
715	Cincinnati	'24	Baldwin 84-30AA	4-WH557R5	2-WH28A	102,300	56	55'-3"	8'-8"	12'-7"	5/11/24	'40	--		122- 130
716, 717	Cincinnati	'24	Baldwin 84-30AA	4-WH557R5	2-WH28A	102,300	56	55'-3"	8'-8"	12'-7"	5/20/24	'40	--		122- 130
718	Cincinnati	'24	Baldwin 84-30AA	4-WH557R5	2-WH28A	102,300	56	55'-3"	8'-8"	12'-7"	5/13/24	'40	--		122- 130
719	Cincinnati	'24	Baldwin 84-30AA	4-WH557R5	2-WH28A	102,300	56	55'-3"	8'-8"	12'-7"	5/28/26	'40	--	Wrecked 2/23/30 at Burlington Rd., Kenosha. Rebuilt for limited train service.	122- 130
720	Cincinnati	'26	Baldwin 84-30AA	4-WH557R5	2-WH28A	102,300	56	55'-3"	8'-8"	12'-7"	5/21/26	'40	--		122- 130
721	Cincinnati	'26	Baldwin 84-30AA	4-WH557R5	2-WH28A	102,300	56	55'-3"	8'-8"	12'-7"	4/22/26	'40	--		122- 130
722	Cincinnati	'26	Baldwin 84-30AA	4-WH557R5	2-WH28A	102,300	56	55'-3"	8'-8"	12'-7"	5/11/26	'40	--		122- 130
723	Cincinnati	'26	Baldwin 84-30AA	4-WH557R5	2-WH28A	102,300	56	55'-3"	8'-8"	12'-7"	5/23/26	'40	--		122- 130
724	Cincinnati	'26	Baldwin 84-30AA	4-WH557R5	2-WH28A	102,300	56	55'-3"	8'-8"	12'-7"	5/21/26	'40	--		122- 130
725	Cincinnati	'26	Baldwin 84-30AA	4-WH557R5	2-WH28A	102,300	56	55'-3"	8'-8"	12'-7"	6/11/26	'40	--	Wrecked 2/23/30 at Burlington Rd., Kenosha. Rebuilt for limited train service.	122- 130
726	Cincinnati	'26	Baldwin 84-30AA	4-WH557R5	2-WH28A	102,300	56	55'-3"	8'-8"	12'-7"	5/13/26	'40	--		122- 130
727	Cincinnati	'26	Baldwin 84-30AA	4-WH557R5	2-WH28A	102,300	56	55'-3"	8'-8"	12'-7"	5/13/26	'40	--		122- 130
728	Cincinnati	'26	Baldwin 84-30AA	4-WH557R5	2-WH28A	102,300	56	55'-3"	8'-8"	12'-7"	5/11/26	'40	--		122- 130
729	Cincinnati	'26	Baldwin 84-30AA	4-WH557R5	2-WH28A	102,300	56	55'-3"	8'-8"	12'-7"	5/20/26	'40	--		122- 130
730	Cincinnati	'26	Baldwin 84-30AA	4-WH557R5	2-WH28A	102,000	52	55'-3"	8'-8"	12'-7"	7/3/26	'40	--	Wrecked 2/23/30 at Burlington Rd., Kenosha. Rebuilt for limited train service.	122- 130
731	Cincinnati	'26	Baldwin 84-30AA	4-WH557R5	2-WH28A	102,300	56	55'-3"	8'-8"	12'-7"	7/3/26	'40	--		122- 130
732	Cincinnati	'26	Baldwin 84-30AA	4-WH557R5	2-WH28A	102,300	56	55'-3"	8'-8"	12'-7"	6/21/26	'40	--		122- 130
733	Jewett	'17	Brill 27MCB3X	4-WH557R5	2-WH28A	102,300	56	56'-0"	8'-8"	12'-5"	5/17/27	'40	--	Rebuilt at Cincinnati from parlor-buffet car #40.	122- 130
734	Jewett	'17	Brill 27MCB3X	4-WH557R5	2-WH28A	102,300	56	56'-0"	8'-8"	12'-5"	5/16/27	'40	--	Rebuilt at Cincinnati from parlor-buffet car #405. Wrecked and rebuilt using an end from #13.	122- 130
735	Jewett	'17	Brill 27MCB3X	4-WH557R5	2-WH28A	102,300	56	56'-0"	8'-8"	12'-5"	5/11/27	'40	--	Rebuilt at Cincinnati from parlor-buffet car #40.	122- 130
736	Pullman	'28	Baldwin 84-35AA	4-WH557R5	2-WH28A	103,500	52	55'-3"	8'-8"	12'-7"	5/23/28	'40	6/30/50		
737	Pullman	'28	Baldwin 84-35AA	4-WH557R5	2-WH28A	103,500	52	55'-3"	8'-8"	12'-7"	6/15/28	'40	7/28/50		
738	Pullman	'28	Baldwin 84-35AA	4-WH557R5	2-WH28A	103,500	52	55'-3"	8'-8"	12'-7"	6/1/28	'40	8/15/50		
739	Pullman	'28	Baldwin 84-35AA	4-WH557R5	2-WH28A	103,500	52	55'-3"	8'-8"	12'-7"	5/21/28	'40	8/11/50		
740	Pullman	'28	Baldwin 84-35AA	4-WH557R5	2-WH28A	103,500	52	55'-3"	8'-8"	12'-7"	5/21/28	'40	--		
741	Pullman	'28	Baldwin 84-35AA	4-WH557R5	2-WH28A	103,500	52	55'-3"	8'-8"	12'-7"	5/23/28	'40	10/1/51		
742	Pullman	'28	Baldwin 84-35AA	4-WH557R5	2-WH28A	103,500	52	55'-3"	8'-8"	12'-7"	5/22/28	'40	--		
743	Pullman	'28	Baldwin 84-35AA	4-WH557R5	2-WH28A	103,500	52	55'-3"	8'-8"	12'-7"	5/22/28	'40	--		
744	Pullman	'28	Baldwin 84-35AA	4-WH557R5	2-WH28A	103,500	52	55'-3"	8'-8"	12'-7"	5/22/28	'40	--		
745	Pullman	'28	Baldwin 84-35AA	4-WH557R5	2-WH28A	103,500	52	55'-3"	8'-8"	12'-7"	5/11/28	'40	--	Wrecked 2/23/30 at Burlington Rd., Kenosha. Scrapped 2/1/51.	
746	Pullman	'28	Baldwin 84-35AA	4-WH557R5	2-WH28A	103,500	52	55'-3"	8'-8"	12'-7"	6/1/28	'40	12/1/51		
747	Pullman	'28	Baldwin 84-35AA	4-WH557R5	2-WH28A	103,500	52	55'-3"	8'-8"	12'-7"	6/9/28	'40	--		
748	Pullman	'28	Baldwin 84-35AA	4-WH557R5	2-WH28A	103,500	52	55'-3"	8'-8"	12'-7"	6/6/28	'40	--		
749	Pullman	'28	Baldwin 84-35AA	4-WH557R5	2-WH28A	103,500	52	55'-3"	8'-8"	12'-7"	6/17/28	'40	--		
750	Pullman	'28	Baldwin 84-35AA	4-WH557R5	2-WH28A	103,500	52	55'-3"	8'-8"	12'-7"	6/12/28	'40	12/19/52		
751	Pullman	'28	Baldwin 84-35AA	4-WH557R5	2-WH28A	103,500	52	55'-3"	8'-8"	12'-7"	5/22/28	'40	--		
752	Standard	'30	Baldwin 84-30AA	4-WH557R5	2-WH28A	103,300	52	55'-3"	8'-8"	12'-7"	5/15/30	'40	--		
753	Standard	'30	Baldwin 84-30AA	4-WH557R5	2-WH28A	103,300	52	55'-3"	8'-8"	12'-7"	5/15/30	'40	--		
754	Standard	'30	Baldwin 84-30AA	4-WH557R5	2-WH28A	103,300	52	55'-3"	8'-8"	12'-7"	5/15/30	'40	--		
755	Standard	'30	Baldwin 84-30AA	4-WH557R5	2-WH28A	103,300	52	55'-3"	8'-8"	12'-7"	5/15/30	'40	--		
756	Standard	'30	Baldwin 84-30AA	4-WH557R5	2-WH28A	103,300	52	55'-3"	8'-8"	12'-7"	5/15/30	'40	--		
757	Standard	'30	Baldwin 84-30AA	4-WH557R5	2-WH28A	103,300	52	55'-3"	8'-8"	12'-7"	5/15/30	'40	--		
758	Standard	'30	Baldwin 84-30AA	4-WH557R5	2-WH28A	103,300	52	55'-3"	8'-8"	12'-7"	5/15/30	'40	10/17/52		
759	Standard	'30	Baldwin 84-30AA	4-WH557R5	2-WH28A	103,800	52	55'-3"	8'-8"	12'-7"	3/15/30	'40	--		
760	Standard	'30	Baldwin 84-30AA	4-WH557R5	2-WH28A	103,800	52	55'-3"	8'-8"	12'-7"	3/15/30	'45	3/21/52		
761	Standard	'30	Baldwin 84-30AA	4-WH557R5	2-WH28A	103,300	52	55'-3"	8'-8"	12'-7"	5/15/30	'40	10/11/57		

Details of cars 737-761 will appear in CERA Bulletin '67.

CAR NUMBER	ORIGINAL BUILDER	BUILT	TRUCKS	MOTORS	MASTER CONTROLLER	WEIGHT	SEATS	LENGTH OVERALL	WIDTH OVERALL	HEIGHT OVER ROOF	IN SERVICE	DATE MODERNIZED	MADE SILVERLINER	REMARKS	DETAILS ON PAGE
STEEL INTERURBAN COACHES (Continued)															
762	Standard	'30	Baldwin 84-30AA	4- WH557R5	2-WH28A	103,800	52	55'-3"	8'-8"	12'-7"	3/15/30	'49	11/21/56		Details of cars 762-804 will appear in CERA Bulletin 107.
763	Standard	'30	Baldwin 84-30AA	4- WH557R5	2-WH28A	103,800	52	55'-3"	8'-8"	12'-7"	3/15/30	'49	3/20/58		
764	Standard	'30	Baldwin 84-30AA	4- WH557R5	2-WH28A	103,800	52	55'-3"	8'-8"	12'-7"	3/15/30	'50	7/22/55		
765	Standard	'30	Baldwin 84-30AA	4- WH557R5	2-WH28A	103,800	52	55'-3"	8'-8"	12'-7"	3/15/30	--	--	Wrecked 8/9/32 at State Line road. Scrapped 8/1941.	
766	Standard	'30	Baldwin 84-30AA	4- WH557R5	2-WH28A	103,800	52	55'-3"	8'-8"	12'-7"	3/15/30	'49	5/8/50		
767	Standard	'30	Baldwin 84-30AA	4- WH557R5	2-WH28A	104,460	52	55'-3"	8'-8"	12'-7"	3/15/30	'49	6/7/56		
768	Standard	'30	Baldwin 84-30AA	4- WH557R5	2-WH28A	104,460	52	55'-3"	8'-8"	12'-7"	3/15/30	'49	6/24/58		
769	Standard	'30	Baldwin 84-30AA	4- WH557R5	2-WH28A	104,460	52	55'-3"	8'-8"	12'-7"	3/15/30	'50	7/20/56		
770	Standard	'30	Baldwin 84-30AA	4- WH557R5	2-WH28A	104,460	52	55'-3"	8'-8"	12'-7"	3/15/30	'45	8/28/52		
771	Standard	'30	Baldwin 84-30AA	4- WH557R5	2-WH28A	104,460	52	55'-3"	8'-8"	12'-7"	3/15/30	'42	1/14/55		
772	Standard	'30	Baldwin 84-30AA	4- WH557R5	2-WH28A	104,460	52	55'-3"	8'-8"	12'-7"	3/15/30	'50	--		
773	Standard	'30	Baldwin 84-30AA	4- WH557R5	2-WH28A	104,460	52	55'-3"	8'-8"	12'-7"	3/15/30	'42	4/15/55		
774	Standard	'30	Baldwin 84-30AA	4- WH557R5	2-WH28A	104,460	52	55'-3"	8'-8"	12'-7"	3/15/30	'50	5/8/50		
775	Standard	'30	Baldwin 84-30AA	4- WH557R5	2-WH28A	104,460	52	55'-3"	8'-8"	12'-7"	3/15/30	'50	10/8/56		
776	Standard	'30	Baldwin 84-30AA	4- WH557R5	2-WH28A	104,460	52	55'-3"	8'-8"	12'-7"	3/15/30	'50	4/25/50		
801-802	St. Louis	'41	Commonwealth	8-WH 1443B1	2- WH XMA1	214,000	146	155'-4"	9'-2"	12'-7"	2/8/41			Electroliner.	
803-804	St. Louis	'41	Commonwealth	8-WH 1443B1	2- WH XMA1	214,000	146	155'-4"	9'-2"	12'-7"	2/22/41			Electroliner.	
STEEL COMBINATION COACH-BAGGAGE CARS															
250	Jewett	'17	Baldwin 84-30A	4- WH557A5	2-WH28A	91,000	28	56'-0"	8'-8"	12'-5"	3/24/17	--	--	Originally 40 seats, decreased 7/28/25.	132- 133
251	Jewett	'17	Baldwin 84-30A	4- WH557A5	2-WH28A	91,000	24	56'-0"	8'-8"	12'-5"	3/6/17	--	6/19/53	Originally 40 seats, decreased 10/3/25.	132- 133
252	Jewett	'17	Baldwin 84-30A	4- WH557A5	2-WH28A	91,000	28	56'-0"	8'-8"	12'-5"	5/23/17	--	--	Originally 40 seats, decreased 5/25/27.	132- 133
253	Jewett	'17	Baldwin 84-30A	4- WH557A5	2-WH28A	91,000	28	56'-0"	8'-8"	12'-5"	5/17/17	--	--	Originally 40 seats, decreased 6/17/24.	132- 133
254	Jewett	'17	Baldwin 84-30A	4- WH557A5	2-WH28A	91,000	28	56'-0"	8'-8"	12'-5"	4/30/17	--	--	Originally 40 seats, decreased 8/26/25.	132- 133
255	Jewett	'17	Baldwin 84-30A	4- WH557A5	2-WH28A	91,000	--	56'-0"	8'-8"	12'-5"	4/14/17	--	--	Seats removed. 40 seats instal- led again 7/2/42. Removed 12/1/46. Used for sailors' baggage.	132- 133
256	Jewett	'17	Baldwin 84-30A	4- WH557A5	2-WH28A	91,000	40	56'-0"	8'-8"	12'-5"	5/2/17	--	--		132- 133
STEEL PARLOR AND DINING CARS															
404	Cincinnati	'17	Baldwin 84-30AA	4- WH557A5	2-WH28A	93,300	24	56'-0"	8'-8"	12'-5"	3/13/17	--	--	Parlor-buffet car. Rebuilt at Cincinnati to coach #734, 1926.	134- 136
405	Cincinnati	'17	Baldwin 84-30AA	4- WH557A5	2-WH28A	93,300	31	56'-0"	8'-8"	12'-5"	3/1/17	--	--	Parlor-buffet car. Rebuilt at Cincinnati to coach #735, 1926.	134- 136
406	Cincinnati	'17	Baldwin 84-30AA	4- WH557A5	2-WH28A	93,300	31	56'-0"	8'-8"	12'-5"	3/17/17	--	--	Parlor-buffet car. Rebuilt at Cincinnati to coach #736, 1926.	134- 136
407	Cincinnati	'20	Baldwin 84-30AA	Trail	2-WH28A	82,000	28	55'-3"	8'-8"	12'-7"	2/9/21	--	--	Diner. Out of service 1928. Retired 1940.	137
408	Cincinnati	'20	Baldwin 84-30AA	4- WH557R5	2-WH28A	94,000	22	55'-3"	8'-8"	12'-7"	2/12/21	--	--	Diner. Out of service 1931. Retired 1940.	137
409	Cincinnati	'23	Baldwin 84-30AA	4- WH557R5	2-WH28A	103,200	24	55'-3"	8'-8"	12'-7"	6/30/23	--	--	Diner. Rebuilt 1942 to coach.	138- 139
410	Cincinnati	'23	Baldwin 84-30AA	Trail	1-WH28A	78,600	31	55'-3"	8'-8"	12'-7"	7/11/23	--	--	Cars 410-413 were parlor- observation cars with open platform at rear end. Out of service 1932. #410 rebuilt 12/31/42 to coach.	140- 142
411	Cincinnati	'23	Baldwin 84-30AA	Trail	1-WH28A	78,600	31	55'-3"	8'-8"	12'-7"	7/11/23	--	--	Rebuilt 2/25/43 to coach.	140- 142
412	Cincinnati	'24	Baldwin 84-30AA	Trail	1-WH28A	78,600	31	55'-3"	8'-8"	12'-7"	7/3/24	--	--	Rebuilt 4/8/43 to coach.	140- 142
413	Cincinnati	'24	Baldwin 84-30AA	Trail	1-WH28A	78,600	31	55'-3"	8'-8"	12'-7"	7/3/24	--	--	Rebuilt 5/28/43 to coach.	140- 142
414	Cincinnati	'24	Baldwin 84-30AA	4- WH557R5	2-WH28A	102,000	24	55'-3"	8'-8"	12'-7"	7/23/24	--	--	Diner. Out of service 1934. Rebuilt 3/4/42 to coach.	143- 145
415	Cincinnati	'26	Baldwin 84-30AA	Trail	2-WH28A	86,000	23	55'-3"	8'-8"	12'-7"	7/3/26	--	10/26/50	Diner. Rearranged 10/17/40 to tavern-lounge car.	143- 145
416	Cincinnati	'26	Baldwin 84-30AA	Trail	2-WH28A	75,000	24	55'-3"	8'-8"	12'-7"	6/19/26	--	--	Diner. Out of service 1931. Rebuilt 1/27/42 to coach.	143- 145
417	Cincinnati	'26	Baldwin 84-30AA	Trail	2-WH28A	86,000	23	55'-3"	8'-8"	12'-7"	6/19/26	--	--	Diner. Rearranged 11/8/40 to tavern-lounge car. Out of service 1951. Retired 12/31/55. Scrapped 1959.	143- 145
418	Pullman	'28	Baldwin 84-30AA	Trail	2-WH28A	81,200	22	55'-3"	8'-8"	12'-7"	10/3/28	--	--	Diner. Out of service 1949. Retired 12/31/55. Scrapped 1959.	Details of cars 418-420 will appear in CERA Bulletin 107.
419	Pullman	'28	Baldwin 84-30AA	Trail	2-WH28A	81,200	22	55'-3"	8'-8"	12'-7"	9/29/28	--	--	Diner. Out of service 1949. Retired 12/31/55. Scrapped 1959.	
420	Pullman	'28	Baldwin 84-30AA	Trail	1-WH28A	80,000	31	55'-3"	8'-8"	12'-7"	9/28/28	--	--	Parlor-observation car with open platform at rear end. Out of service 1932. Rebuilt 7/21/43 to coach.	

CAR NUMBER	ORIGINAL BUILDER	BUILT	TRUCKS	MOTORS	MASTER CONTROLLER	WEIGHT	CAPACITY Thousand pounds	LENGTH OVERALL	WIDTH OVERALL	HEIGHT OVER ROOF	IN SERVICE	OUT OF SERVICE	REBUILT, SOLD OR RETIRED	REMARKS	DETAILS ON PAGE
EXPRESS CARS															
1	Brill	'02	Brill	4-GE57	2-GE K14									Retired before 1910. Disposition unknown.	146
2	Brill	'02	Curtis	4-GE57	2-GE K14	70,000	20	39'-8"	8'-11"	12'-2"	9/8/02	'17	'17	Rebuilt 10/1917 to tool car.	146
6	Brill	'02	Baldwin	4-GE73C	2-GE C6K	62,000		50'-1"	8'-11"	12'-4"		'30	'36		146-147
11	Brill	'02	Brill 27A1	Trail	1-GE C6K	40,000	20	46'-8"	8'-10"	11'-8"	/ / 17	'24	'25	Rebuilt 1917 from combine.	15-27
12	Brill	'02	Curtis	Trail	1-GE C6K	48,000		47'-6"	9'-2"	11'-8"	4/4/10	'24	'25	Rebuilt 4/4/10 from combine. Had 4-GE57 motors until 1/15/18.	95-97
17	Fullman	'00	Brill 27A1	Trail	None	23,300	20	31'-11"	7'-9"	11'-10"	2/ / 18	'20	'28	Rebuilt 2/1918 from work car.	98-100
18	McCummings	'10	McCummings 20A	4-GE73C	2-GE C6K	61,600		50'-0"	8'-11"	12'-2"	2/12/10	'18	'18	Destroyed 7/26/18.	--
75	American	'10	McCummings 70A	None	1-GE C6A	56,000		52'-3"	8'-7"	13'-5"			'37	Rebuilt from coach.	105
200	Jewett	'09	Baldwin 295	4-GE73C	2-GE C6K	79,300		52'-3"	8'-8"	13'-5"	1/ / 17	'39	'45	Rebuilt 1/1917 from combine. Sold for scrap.	111-112
201	Jewett	'09	Baldwin 295	4-GE73C	2-GE C6K	79,300		52'-3"	8'-8"	13'-5"	1/ / 17	'37	'37	Rebuilt 1937 to plow.	111-112
202	Jewett	'09	Baldwin 295	4-GE73C	2-GE C6K	79,300		52'-3"	8'-8"	13'-5"	1/ / 17	'45	'46	Rebuilt 1/1917 from combine. Rebuilt about 1936 to supply car.	111-112
203	Cincinnati	'20	Baldwin 78-35AA	Trail	2-WH 28A	60,000	40	50'-0"	8'-8"	12'-7"	3/20/20	'43	'53	Cars 203-208 had 2-WH557R5 motors until 1942. Car 203 sold 3/1953 to CHF Co. and renumbered #240.	148-150
204	Cincinnati	'20	Baldwin 78-35AA	Trail	2-WH 28A	60,000	40	50'-0"	8'-8"	12'-7"	3/17/20	'45	'48	Sold for scrap.	148-150
205	Cincinnati	'20	Baldwin 78-35AA	Trail	2-WH 28A	60,000	40	50'-0"	8'-8"	12'-7"	3/19/30	'45	'48	Sold for scrap.	148-150
206	Cincinnati	'20	Baldwin 78-35AA	Trail	2-WH 28A	60,000	40	50'-0"	8'-8"	12'-7"	3/16/20	'45	'48	Sold for scrap.	148-150
207	Cincinnati	'20	Baldwin 78-35AA	Trail	2-WH 28A	60,000	40	50'-0"	8'-8"	12'-7"	2/16/20	'42	'42	Rebuilt 1942 to tool car.	148-150
208	Cincinnati	'20	Baldwin 78-35AA	Trail	2-WH 28A	60,000	40	50'-0"	8'-8"	12'-7"	2/16/20	'47	'48	Sold for scrap.	148-150
209	Cincinnati	'20	Baldwin 78-35AA	2-WH557R5	2-WH 28A	74,500	40	50'-0"	8'-8"	12'-7"	3/4/20	'47	'48	Sold for scrap.	148-150
210	Cincinnati	'20	Baldwin 78-35AA	2-WH557R5	2-WH 28A	74,500	40	50'-0"	8'-8"	12'-7"	3/4/20	'48	'48	Sold for scrap.	148-150
211	Cincinnati	'20	Baldwin 78-35AA	2-WH557R5	2-WH 28A	74,500	40	50'-0"	8'-8"	12'-7"	2/26/20	'48	'48	Sold for scrap.	148-150
212	Cincinnati	'20	Baldwin 78-35AA	2-WH557R5	2-WH 28A	74,500	40	50'-0"	8'-8"	12'-7"	3/24/20	'48	'48	Sold for scrap.	148-150
213	Cincinnati	'20	Baldwin 78-35AA	2-WH557R5	2-WH 28A	74,500	40	50'-0"	8'-8"	12'-7"	3/25/20	'40	'40	Rebuilt 1940 to ice cutter.	148-150
214	Cincinnati	'20	Baldwin 78-35AA	2-WH557R5	2-WH 28A	74,500	40	50'-0"	8'-8"	12'-7"	3/25/20	'48	'48	Sold for scrap.	148-150
215	Cincinnati	'22	Baldwin 78-35AA	2-WH557R5	2-WH 28A	74,500	40	50'-0"	8'-8"	12'-7"	3/24/22			Originally had 2-WH557R5 motors. Rebuilt to tool car.	150-152
216	Cincinnati	'22	Baldwin 78-35AA	2-WH557R5	2-WH 28A	74,500	40	50'-0"	8'-8"	12'-7"	9/24/22			Rebuilt about 1948 to tool car.	150-152
217,218	Cincinnati	'22	Baldwin 78-35AA	WH557R5	2-WH 28A	78,000	40	50'-0"	8'-8"	12'-4"	9/24/22			Rebuilt to cabooses during World War II.	150-152
219	Cincinnati	'22	Baldwin 78-35AA	2-WH557R5	2-WH 28A	78,000	40	50'-0"	8'-8"	12'-4"	10/18/22			Rebuilt about 1948 to work car.	150-152
220	Cincinnati	'22	Baldwin 78-35AA	2-WH557R5	2-WH 28A	78,000	40	50'-0"	8'-8"	12'-4"	10/19/22			Rebuilt to sleet cutter.	150-152
221	Cincinnati	'22	Baldwin 78-35AA	2-WH557R5	2-WH 28A	78,000	40	50'-0"	8'-8"	12'-4"	3/15/22	'47	'48	Sold for scrap.	150-152
222	Cincinnati	'22	Baldwin 78-35AA	2-WH557R5	2-WH 28A	78,000	40	50'-0"	8'-8"	12'-4"	9/24/22	'47	'48	Sold for scrap.	150-152
223	Cincinnati	'22	Baldwin 78-35AA	2-WH557R5	2-WH 28A	78,000	40	50'-0"	8'-8"	12'-4"	10/21/22	'48	'48	Sold for scrap.	150-152
224	Cincinnati	'22	Baldwin 78-35AA	2-WH557R5	2-WH 28A	78,000	40	50'-0"	8'-8"	12'-4"	10/22/22	'47	'48	Sold for scrap.	150-152
225	Cincinnati	'22	Baldwin 78-35AA	2-WH557R5	2-WH 28A	78,000	40	50'-0"	8'-8"	12'-4"	10/18/22	'47	'48	Sold for scrap.	150-152
226	Cincinnati	'22	Baldwin 78-35AA	2-WH557R5	2-WH 28A	78,000	40	50'-0"	8'-8"	12'-4"	10/17/22	'47	'48	Sold for scrap.	150-152
227	Cincinnati	'22	Baldwin 78-35AA	2-WH557R5	2-WH 28A	78,000	40	50'-0"	8'-8"	12'-4"	10/24/22	'48	'48	Sold for scrap.	150-152
228	Cincinnati	'22	Baldwin 78-35AA	2-WH557R5	2-WH 28A	78,000	40	50'-0"	8'-8"	12'-4"	10/29/22			Rebuilt to sleet cutter.	150-152
229	Cincinnati	'22	Baldwin 78-35AA	2-WH557R5	2-WH 28A	78,000	40	50'-0"	8'-8"	12'-4"	1/24/22			Had only 2 motors until 1944. Rebuilt to work car.	150-152
230	Cincinnati	'24	Baldwin 78-35AA	WH557R5	2-WH 28A	90,000	40	50'-0"	8'-8"	12'-4"	2/16/24	'47	'48	Sold for scrap.	150-152
231	Cincinnati	'24	Baldwin 78-35AA	WH557R5	2-WH 28A	90,000	40	50'-0"	8'-8"	12'-4"	2/13/24	'49	'49	Rebuilt 1949 to plow.	150-152
232	Cincinnati	'24	Baldwin 78-35AA	WH557R5	2-WH 28A	90,000	40	50'-0"	8'-8"	12'-4"	2/11/24			Rebuilt to work car.	150-152
233	Cincinnati	'24	Baldwin 78-35AA	WH557R5	2-WH 28A	90,000	40	50'-0"	8'-8"	12'-4"	3/11/24	'46	'47	Burned at Highwood.	150-152
234	Cincinnati	'24	Baldwin 78-35AA	WH557R5	2-WH 28A	74,000	40	50'-0"	8'-8"	12'-4"	3/27/24			Originally had 4 motors. Rebuilt about 1948 to tool car.	150-152
235	Cincinnati	'24	Baldwin 78-35AA	WH557R5	2-WH 28A	74,000	40	50'-0"	8'-8"	12'-4"	3/10/24	'59	'59	Originally had 4 motors. Burned at Highwood 11/1959.	150-152
236	Cincinnati	'24	Baldwin 78-35AA	WH557R5	2-WH 28A	74,000	40	50'-0"	8'-8"	12'-4"	3/10/24	'54	'55	Originally had 4 motors. Sold to CHF Co. and renumbered #243.	150-152
237	Cincinnati	'24	Baldwin 78-35AA	WH557R5	2-WH 28A	74,000	40	50'-0"	8'-8"	12'-4"	3/7/24			Originally had 4 motors. Rebuilt to sleet cutter.	150-152
238	Cincinnati	'24	Baldwin 78-35AA	WH557R5	2-WH 28A	74,000	40	50'-0"	8'-8"	12'-4"	2/27/24	'47	'48	Rebuilt to plow.	150-152
239	Cincinnati	'24	Baldwin 78-35AA	WH557R5	2-WH 28A	74,000	40	50'-0"	8'-8"	12'-4"	2/26/24			Originally had 4 motors. Rebuilt to sleet cutter.	150-152
240	Cincinnati	'26	Baldwin 78-35AA	Trail	2-WH 28A	69,500	35	50'-5"	8'-8"	12'-4"	1/25/26	'47	'48	Refrigerated express car.	153
241	Cincinnati	'26	Baldwin 78-35AA	Trail	2-WH 28A	69,500	35	50'-5"	8'-8"	12'-4"	1/25/26	'47	'48	Refrigerated express car.	153
242	Cincinnati	'26	Baldwin 78-35AA	Trail	2-WH 28A	69,500	35	50'-5"	8'-8"	12'-4"	1/25/26	'47	'48	Refrigerated express car.	153

CAR NUMBER	ORIGINAL BUILDER	BUILT	TRUCKS	MOTORS	MASTER CONTROLLER	WEIGHT	CAPACITY Thousand pounds	LENGTH OVERALL	WIDTH OVERALL	HEIGHT OVER ROOF	IN SERVICE	OUT OF SERVICE	REBUILT, SOLD OR RETIRED	REMARKS	DETAILS ON PAGE
LOCOMOTIVES															
450	General Electric	'07	Alco	4-GE 205B	2-GE C72A	73,000	--	29'-7"	8'-8"	12'-0"	12/21/07			Sold 2/1948 to Commonwealth Edison Co. and renumbered #.	154
451	General Electric	'07	Alco	4-GE 205B	2-GE C72A	73,000	--	29'-7"	8'-8"	12'-0"	12/19/07	'48	'49	Retired 2/1948. Sold 3/1949 for scrap.	154
452	General Electric	'17	RM-63B	4-GE 257A	2-GE C90A	100,000	--	37'-4"	9'-6"	13'-0"	2/14/18	--	--		155
453	General Electric	'17	Alco	4-GE 257A	2-GE C90A	100,000	--	37'-4"	9'-6"	13'-0"	6/28/18	--	--		155
454	General Electric	'23	RM-63B	4-GE 257A	2-GE C90A	100,000	--	37'-4"	9'-6"	13'-0"	12/10/23	--	--		155
455,456	General Electric	'27	RM-63B	4-GE 251A	2-GE C83	121,600	--	40'-0"	9'-9"	12'-1"	1/4/28	--	--	Trolley-battery locomotives.	Details of locomotives 455-459 will appear in CERA Bulletin 107.
457	General Electric	'29	RM-63B	4-GE 257A	2-GE C90A	100,000	--	37'-4"	9'-6"	13'-0"	1/31/42	--	--	Acquired 12/47 from Arkansas Valley Interurban Ry., where it was #602.	
458	Oregon Electric	'40	Baldwin 78-30AA	8-WH557A	2-GE C137A	202,400	--	59'-0"	9'-3"	15'-3"	1/27/48	--	--	Acquired 12/47 from Oregon Electric Ry., where it was #50. Had 8-GE 222 motors until 1948.	
459	Oregon Electric	'41	Baldwin 78-30AA	8-WH557A	2-GE C137A	199,500	--	59'-0"	9'-3"	13'-11"	11/22/48	--	--	Acquired 12/47 from Oregon Electric Ry., where it was #51. Had 8-GE 222 motors until 1948.	
FREIGHT CARS															
217,218	Cincinnati	'22	Baldwin 78-35AA	2-WH557R5	2-WH 28A	78,000	--	50'-0"	8'-8"	12'-4"		--	--	Caboose rebuilt from express cars	150-152
565-568	C&NE	'08	Single Rigid	None	None			13'-8"	8'-8"	4'-9"				Wooden low side gondola cars.	Details in Bulletin 107.
609	Haffner-Stack	'24	Arch Bar	None	None		100	41'-6"	9'-6"			--	--	Flat car, rebuilt about 1920 from ditcher.	
611	Hoskiss Blue	'25	Arch Bar	None	None		100	41'-6"	9'-6"	3'-7"	/ 44	'52		Flat car, rebuilt 1944 from cable reel car. Sold to CHF Co. and renumbered #237.	
612	Hoskiss Blue	'25	Arch Bar	None	None		100	41'-6"	9'-6"	3'-7"	/ 44	'55		Flat car, rebuilt 1944 from cable reel car. Sold for scrap.	
1000,1001			Arch Bar	None	None		--	41'-4"	9'-6"	13'-1"				Wooden side door cabooses, acquired 1917 from Central Locomotive & Car Works.	156
1002-1005	ACF	'27	Arch Bar	None	None	54,000	--	41'-4"	8'-11"	13'-6"	2/2/27	--	--	Wooden cabooses. Cupolas removed.	B-107
1006	ACF	'29	Arch Bar	None	None		--				9/30/29	--	--	Wooden caboose. Cupola removed.	B-107
1212-1218	Western Wheeled Scraper Co.	'06	Arch Bar	None	None	29,000	36	22'-10"	10'-1"	7'-6"				12 yard side dump cars.	--
1219	Western Wheeled Scraper Co.	'06	Arch Bar	None	None	29,000	36	22'-10"	10'-1"	7'-6"				12 yard side dump car. Rebuilt to weed sprayer.	--
1220-1223	Western Wheeled Scraper Co.	'06	Arch Bar	None	None	29,000	36	22'-10"	10'-1"	7'-6"				12 yard side dump cars.	--
1224-1232	Western Wheeled Scraper Co.	'07	Arch Bar	None	None	27,000	36	30'-0"	9'-6"	7'-0"				12 yard side dump cars.	--
1233	Western Wheeled Scraper Co.	'07	Arch Bar	None	None	27,000	36	30'-0"	9'-6"	7'-0"		'38		12 yard side dump car. Sold 1938 to CHF Co. and renumbered #233.	--
1234,1235	Western Wheeled Scraper Co.	'07	Arch Bar	None	None	27,000	36	30'-0"	9'-6"	7'-0"				12 yard side dump cars.	--
1236	Western Wheeled Scraper Co.	'07	Arch Bar	None	None	27,000	36	30'-0"	9'-6"	7'-0"		'38		12 yard side dump car. Sold 1938 to CHF Co. and renumbered #234.	--
1237-1264	Western Wheeled Scraper Co.	'07	Arch Bar	None	None	27,000	36	30'-0"	9'-6"	7'-0"				12 yard side dump cars.	--
1265	Western Wheeled Scraper Co.	'07	Arch Bar	None	None	27,000	36	30'-0"	9'-6"	7'-0"		'22		12 yard side dump car. Rebuilt 1922 to weed sprayer.	--
1266-1273	Western Wheeled Scraper Co.	'07	Arch Bar	None	None	27,000	36	30'-0"	9'-6"	7'-0"		--	--	12 yard side dump cars.	--
1274-1293	Western Wheeled Scraper Co.	'26	Arch Bar	None	None	80,000	80	31'-1"	10'-4"	8'-5"	7/15/26			20 yard air operated side dump cars.	--
1400-1402	Pullman	'03	Arch Bar	None	None		60	37'-0"	9'-10"	4'-1"				Wooden flat cars.	156
1403	Pullman	'04	Arch Bar	None	None		60	37'-4"	9'-9"	4'-0"		'18	'18	Wooden flat car. Destroyed 8/2/18.	--
1404	Pullman	'04	Arch Bar	None	None		60	37'-4"	9'-9"	4'-0"		'45		Wooden flat car. Sold 1945 to CHF Co. and renumbered #231.	--
1405-1407	Pullman	'04	Arch Bar	None	None		60	37'-4"	9'-9"	4'-0"				Wooden flat cars.	--
1408,1409	Pullman	'07	Arch Bar	None	None		60	34'-0"	9'-9"	4'-0"				Wooden flat cars.	--
1410	Pullman	'07	Arch Bar	None	None		60	34'-0"	9'-9"	4'-0"		--	--	Wooden flat car.	--
1411-1413	Pullman	'07	Arch Bar	None	None		60	34'-0"	9'-9"	4'-0"				Wooden flat cars.	--
1414	Pullman	'07	Arch Bar	None	None		60	34'-0"	9'-9"	4'-0"		--	--	Wooden flat car.	--
1415	Pullman	'07	Arch Bar	None	None		60	34'-0"	9'-9"	4'-0"				Wooden flat car.	--
1416	Pullman	'07	Arch Bar	None	None		60	34'-1"	8'-9"	11'-8"				Wooden flat car. Rebuilt before 1920 to derrick.	--
1417	Pullman	'07	Arch Bar	None	None		60	34'-0"	9'-9"	4'-0"				Wooden flat car.	--
1418	CNS&M RR	'25		None	None		80	34'-0"	8'-10"	4'-7"		--	--	Flat car.	--
1419				None	None		80	34'-0"	8'-10"	4'-7"				Flat car, acquired 1926 from L. E. Myers Co.	--
1500,1501	Standard	'26	Arch Bar	None	None	37,100	40	40'-0"	9'-4"	7'-5"	5/10/26	--	--	Steel truck-trailer flat cars, now used to carry car trucks.	Details in Bulletin 107.
1502,1503	Standard	'26	Arch Bar	None	None	37,100	40	40'-0"	9'-4"	7'-5"			'38	Steel truck-trailer flat cars. Sold 8/1938 to Chicago Rapid Transit Co. and renumbered #S107 and #S108.	
1504-1513	Standard	'27	Arch Bar	None	None	49,800	80	60'-0"	8'-8"	4'-1"		'47		Steel truck-trailer flat cars. Sold 8/1947.	
2000	Pullman	'07	Arch Bar	None	None	29,300	80	36'-6"	9'-9"	7'-11"				Wooden gondola car.	157
2001	Pullman	'07	Arch Bar	None	None			36'-6"	9'-8"	4'-0"		'18		Wooden gondola car. Made a flat car with dimensions shown. Rebuilt 1918 to ballast unloader.	157


CAR NUMBER	ORIGINAL BUILDER	BUILT	TRUCKS	MOTORS	MASTER CONTROLLER	WEIGHT	CAPACITY (Thousands pounds)	LENGTH OVERALL	WIDTH OVERALL	HEIGHT OVER ROOF	IN SERVICE	OUT OF SERVICE	REBUILT OR RETIRED	REMARKS	DETAILS ON PAGE
FREIGHT CARS (Continued)															
2002-2009	Fullman	'07	Arch Bar	None	None	29,300	80	36'-6"	9'-9"	7'-11"				Wooden gondola cars.	157
2010	Fullman	'07	Arch Bar	None	None		60	36'-6"	9'-9"	4'-2"				Wooden gondola car. Made a flat car with dimensions shown before 1918.	157
2011	Fullman	'07	Arch Bar	None	None	29,300	80	36'-6"	9'-9"	7'-11"				Wooden gondola car.	157
2012	Fullman	'07	Arch Bar	None	None	29,300	80	36'-6"	9'-9"	7'-11"		--	--	Wooden gondola car.	157
2013-2017	Fullman	'07	Arch Bar	None	None	29,300	80	36'-6"	9'-9"	7'-11"				Wooden gondola cars.	157
2018	Fullman	'07	Arch Bar	None	None	29,300	80	36'-6"	9'-9"	7'-11"		--	--	Wooden gondola car.	157
2019-2021	Fullman	'07	Arch Bar	None	None	29,300	80	36'-6"	9'-9"	7'-11"				Wooden gondola cars.	157
2022	Fullman	'07	Arch Bar	None	None								'16	Wooden gondola car. Made a flat car in 1912. Rebuilt 1916 to ditcher.	157
2023	Fullman	'07	Arch Bar	None	None			37'-4"	9'-9"	7'-11"			'10	Wooden gondola car. Rebuilt 1910 to plow #601.	157
2024-2029	Fullman	'07	Arch Bar	None	None	29,300	90	36'-6"	9'-9"	7'-11"				Wooden gondola cars.	157
2030-2053			Arch Bar	None	None	34,500	80	38'-2"	9'-9"	7'-6"				Wooden gondola cars. Cars 2030-2059 acquired 1916 from Bert B. Barry.	157
2054			Arch Bar	None	None	34,500	80	38'-2"	9'-9"	7'-6"		'18	'18	Wooden gondola car. Destroyed 8/2/18.	157
2055			Arch Bar	None	None	34,500	80	38'-2"	9'-9"	7'-6"			'51	Wooden gondola car. Sold 1951 to CHF Co. and renumbered #236.	157
2056			Arch Bar	None	None	34,500	80	38'-2"	9'-9"	7'-6"				Wooden gondola car. Rebuilt to tool car.	157
2057-2059			Arch Bar	None	None	34,500	80	38'-2"	9'-9"	7'-6"				Wooden gondola cars.	157
2060				None	None		80	40'-6"	9'-2"	3'-11"				Flat car, acquired 1930 from Fort Worth & Denver RR.	--
3000-3002			Arch Bar	None	None			33'-0"						Wooden box cars, acquired second hand 1907. Rebuilt to camp cars.	--
3003		'87	Arch Bar	None	None	29,800	50	38'-0"	9'-5"	12'-1"				Wooden box car, originally 10 RR #19858. Acquired 1916 from Bert B. Barry. Rebuilt to tool car.	--
3004-3013			Arch Bar	None	None	29,800	50	38'-0"	9'-5"	12'-1"				Wooden box cars, acquired 1916 from Bert B. Barry. Rebuilt to camp cars.	--
3014-3017				None	None	35,000	50	38'-0"	9'-8"	12'-0"				Wooden box cars, acquired 1916 from General Loco. & Car Works.	--
3018			Arch Bar	None	None	35,200	60	43'-4"	9'-4"	14'-1"				Wooden box car, acquired 1917 from Federal Rail Supply Co.	156
3019			Arch Bar	None	None	35,200	60	43'-4"	9'-4"	14'-1"		--	--	Wooden box car, acquired 1917 from Federal Rail Supply Co.	156
3020			Arch Bar	None	None	35,200	60	43'-4"	9'-4"	14'-1"				Wooden box car, acquired 1917 from Federal Rail Supply Co.	156
3021, 3022		'25	Bettendorf	None	None		45	36'-11"	9'-6"	13'-1"				Electrically operated refrigerator cars, acquired 1926 from L. E. Myers Co.	153
4000			Bettendorf C749	None	None		8000 Gal	33'-7"	9'-4"	12'-10"	7/1/22	--	--	Steel tank car, originally GN RR. Acquired 1922 from Railway Manufacturing Agents Co.	--
4001				None	None		10000 Gal	32'-2"	9'-9"	14'-5"		--	--	Steel tank car, acquired 1926 from Anchor Car Co.	--
5000, 5001	American	'23	Arch Bar	None	None	*55,000 44,700	100	*58'-9" 42'-1"	*9'-1" 10'-2"	*8'-4"	4/25/23	'47	'47	Cars 5000-5014 were steel gondola cars, made into truck-trailer flat cars with starred dimensions in 1944-45. Cars 5000, 5001 retired 8/1947.	Details of cars 5000-5014 appear in CERA Bulletin 107.
5000-5005	American	'23	Arch Bar	None	None	*55,000 44,700	100	*58'-9" 42'-1"	*9'-1" 10'-2"	*8'-4"	4/25/23	--	--		
5006-5008	American	'23	Arch Bar	None	None	*55,000 44,700	100	*58'-9" 42'-1"	*9'-1" 10'-2"	*8'-4"	4/25/23	'47	'47	Retired 8/1947.	
5009	American	'23	Arch Bar	None	None	*55,000 44,700	100	*58'-9" 42'-1"	*9'-1" 10'-2"	*8'-4"	4/25/23	--	--		
5010-5013	American	'23	Arch Bar	None	None	*55,000 44,700	100	*58'-9" 42'-1"	*9'-1" 10'-2"	*8'-4"	4/25/23	'47	'47	Retired 8/1947.	
5014	American	'23	Arch Bar	None	None	*55,000 44,700	100	*58'-9" 42'-1"	*9'-1" 10'-2"	*8'-4"	4/25/23	--	--		
5015	J.B. Strauss Co.	'24		None	None	43,000	100	42'-1"	10'-2"	8'-4"	12/29/24	'40	'40	Reinforced concrete gondola car. Sold 6/1940.	150
6000-6006	Standard	'23	Arch Bar	None	None	46,500	100	41'-9"	10'-4"	8'-6"	7/21/23	'40	'40	Drop bottom gondola cars. Sold 6/1940.	--
6007-6019	Standard	'23	Arch Bar	None	None	46,500	100	41'-9"	10'-4"	8'-6"	7/25/23	'40	'40	Drop bottom gondola cars. Sold 6/1940.	--
7001			Andrews	None	None						12/26/46			Ballast gondola car, acquired 1946 from AT&SF RR., where it was #87346. Sold by 1955.	--
7002			Andrews	None	None						11/6/46			Ballast gondola car, acquired 1946 from AT&SF RR., where it was #87813. Sold by 1955.	--
7003			Andrews	None	None						6/3/47			Ballast gondola car, acquired 1947 from AT&SF RR., where it was #89041. Sold by 1955.	--

CAR NUMBER	ORIGINAL BUILDER	BUILT	TRUCKS	MOTORS	MASTER CONTROLLER	WEIGHT	CAPACITY	LENGTH OVERALL	WIDTH OVERALL	HEIGHT OVER ROOF	IN SERVICE	OUT OF SERVICE	REBUILT, SOLD OR RETIRED	REMARKS	DETAILS ON PAGE
SERVICE EQUIPMENT															
1	C&ME RR	'03	Brill	2-GE57	2-GE K14	--		25'-0"			11/ /03		'14	Single truck line car, rebuilt from city car.	--
1			Arch Bar			--		42'-5"	9'-11"	10'-0"				Steam operated pile driver.	--
2	Peckham	'99	Peckham	2-GE57 1-GE57	2-GE K10 1-GE K10	--		24'-0"			10/ /99			Single truck sweeper. Disposition unknown.	--
2	C&ME RR		Brill			--							'16	Double truck sprinkler. Sold for scrap.	--
2	C&ME RR		Brill 27A1			--								Double truck construction car. Disposition unknown.	163
3	McGuire	'99				--						'04	'04	Single truck sweeper. Parts used to build double truck sweeper #3.	--
3	C&ME RR	'04	Brill 27A1	4-GE 57 2-GE 57	2-GE K12 2-GE K11	50,000	--	46'-2"	9'-2"	10'-10"	11/ /04	'51	'54	Double truck sweeper, made from single truck sweeper #3. Sold for scrap, body used by Illinois Railway Museum.	158
4						--								Work car, rebuilt from city car. Disposition unknown.	--
4	C&ME RR		Brill	2-GE57		--								Double truck line car. Retired before 1910, disposition unknown.	163
5	Brill	'02	Curtis	None	None	46,000		39'-8"	8'-11"	12'-2"	10/ /17	'22	'38	Tool car, rebuilt 10/1917 from express car.	146
13	Pullman	'00	Brill 27A1	None	2-GE K14	28,000		36'-11"	7'-9"	11'-10"			'16	Work car, rebuilt about 1910 from combine.	98-100
14	Pullman	'00	Brill 27E1	4-GE57	2-GE K14	40,000		36'-11"	7'-9"	11'-10"			'16	Work car, rebuilt about 1910 from combine.	98-100
15	Pullman	'00	Brill 27A1	4-GE57	2-GE K14	40,000		36'-11"	7'-9"	11'-10"			'16	Wrecker, rebuilt 1911 from combine.	98-100
16	Pullman	'00	Brill 27E1	None	2-GE K14	28,000		36'-11"	7'-9"	11'-10"		'18	'18	Work car, rebuilt 1910 from combine. Rebuilt 2/1918 to express car.	98-100
17	Pullman	'00	Brill 27A1	4-GE57	2-GE K14	40,000		36'-11"	7'-9"	11'-10"			'16	Work car, rebuilt about 1910 from combine.	98-100
19	Pullman	'00	Brill 27	4-GE57	2-GE K14	46,000		36'-11"	7'-9"	11'-10"	12/ /10	'27	'38	Work car, rebuilt 1910 from combine.	98-100
21	McGuire Cummings	'08	Brill 27A1	4-GE57 2-GE57	2-GE K14 2-GE K14	50,000	--	54'-2"	8'-1"	11'-7"		'50	'53	Double truck sweeper. Removable brooms for work service. Sold to CHF Co. and renumbered #238.	158-159
22	McGuire Cummings	'09	Baldwin 295	2-GE57 4-GE57	2-GE K14 2-GE K14	50,000	4000 gal	31'-0"	8'-8"	11'-10"	5/ /09	'11	'11	Sprinkler, used in Milwaukee. Renumbered #603 in 1911.	162
70	McGuire Cummings	'09	Brill 27A1	2-GE57	2-GE K11	62,000	--	54'-7"	8'-6"	10'-10"	12/ /09	'48	'52	Double truck sweeper with tower. Removable brooms for work service. Sold to CHF Co. and renumbered #237.	158-160
121	Jewett	'06	Baldwin 295	4-GE73C	2-GE C6K	71,380	--	52'-3"	9'-1"	13'-5"		'33	'37	Flow, rebuilt 1930 from a coach.	--
131	Jewett	'07	Baldwin 295	4-GE73C	2-GE C6K	76,580	--	52'-3"	8'-8"	13'-5"		'35	'40	Flow, rebuilt about 1930 from a coach.	--
201	Jewett	'09	Baldwin 295	4-GE73C	2-GE C6K	76,000	--	52'-3"	8'-8"	13'-5"		'47	'48	Flow, rebuilt 1937 from express car.	111-112
202	Jewett	'09	Baldwin 295	4-GE73C	2-GE C6K	76,000	--	52'-3"	8'-8"	13'-5"		'46		Supply car, rebuilt about 1936 from express car. Sold 8/1946 to CHF Co.	111-112
207	Cincinnati	'20	Baldwin 78-35AA	None	2-WH 28A	58,000		50'-0"	8'-8"	12'-7"		'48	'48	Tool car, rebuilt 1942 from express car. Sold for scrap.	148-150
213	Cincinnati	'20	Baldwin 78-35AA	2-WH557A5	2-WH 28A	75,000	--	50'-0"	8'-8"	12'-7"		'55		Disc harrow ice cutter, rebuilt 1940 from express car. Sold to CHF Co. and renumbered #242.	148-150
215	Cincinnati	'22	Baldwin 78-35AA	None	2-WH 28A	59,000		50'-0"	8'-8"	12'-4"		--	--	Tool car, rebuilt from express car.	150-152
216	Cincinnati	'22	Baldwin 78-35AA	2-WH557R5	2-WH 28A	78,000		50'-0"	8'-8"	12'-4"		--	--	Tool car, rebuilt about 1948 from express car.	150-152
217	Cincinnati	'22	Baldwin 78-35AA	2-WH557R5	2-WH 28A	78,000	--	50'-0"	8'-8"	12'-4"		--	--	Sleet cutter, rebuilt from a caboose. Used with #220, 228.	150-152
218	Cincinnati	'22	Baldwin 78-35AA	2-WH557R5	2-WH 28A	78,000	--	50'-0"	8'-8"	12'-4"		--	--	Sleet cutter, rebuilt from a caboose. Used with #237, 239.	150-152
219	Cincinnati	'22	Baldwin 78-35AA	2-WH557R5	2-WH 28A	78,000	--	50'-0"	8'-8"	12'-4"		--	--	Work car, rebuilt about 1948 from express car.	150-152
220, 228	Cincinnati	'22	Baldwin 78-35AA	2-WH557R5	2-WH 28A	78,000	--	50'-0"	8'-8"	12'-4"		--	--	Sleet cutters, rebuilt from express cars. Used with #217.	150-152
229	Cincinnati	'22	Baldwin 78-35AA	4-WH557R5	2-WH 28A	90,000	--	50'-0"	8'-8"	12'-4"		--	--	Work car, rebuilt from express car. Used as Highwood switcher.	150-152
231	Cincinnati	'24	Baldwin 78-35AA	4-WH557R5	2-WH 28A	90,000	--	50'-0"	8'-8"	12'-4"		--	--	Flow, rebuilt 1949 from express car.	150-152
232	Cincinnati	'24	Baldwin 78-35AA	4-WH557R5	2-WH 28A	90,000	--	50'-0"	8'-8"	12'-4"		--	--	Work car, rebuilt from express car. Used as Milwaukee switcher.	150-152
234	Cincinnati	'24	Baldwin 78-35AA	2-WH557R5	2-WH 28A	74,000	--	50'-0"	8'-8"	12'-4"		--	--	Tool car, rebuilt about 1948 from express car.	150-152
237	Cincinnati	'24	Baldwin 78-35AA	2-WH557R5	2-WH 28A	74,000	--	50'-0"	8'-8"	12'-4"		--	--	Sleet cutter, rebuilt from express car. Used with #218, 239.	150-152
238	Cincinnati	'24	Baldwin 78-35AA	4-WH557R5	2-WH 28A	90,000	--	50'-0"	8'-8"	12'-4"		--	--	Flow, rebuilt 1949 from express car.	150-152
239	Cincinnati	'24	Baldwin 78-35AA	2-WH557R5	2-WH 28A	74,000	--	50'-0"	8'-8"	12'-4"		--	--	Sleet cutter, rebuilt from express car. Used with #218, 237.	150-152
300	Jewett	'09	Baldwin 295	4-GE73C	2-GE C6K	76,900	--	52'-3"	8'-8"	13'-5"		'39	'39	Sleet cutter, rebuilt 1936 from a coach. Returned 1939 to coach.	113-115
301, 302	Jewett	'09	Baldwin 295	4-GE73C	2-GE C6K	76,900	--	52'-3"	8'-8"	13'-5"		'39	'40	Sleet cutters, rebuilt 1936 from coaches.	113-115
303-305	Jewett	'10	Baldwin 295	4-GE73C	2-GE C6K	74,780	--	52'-3"	8'-7"	13'-5"		'39	'40	Sleet cutters, rebuilt 1936 from coaches.	116
583	C&ME RR	'12				--								Ditcher with clamshell bucket. Disposition unknown.	--
601	Pullman	'07	Arch Bar	None	None	67,600	--	38'-9"	9'-11"	12'-5"	12/ /10	'36	'49	Single end plow, rebuilt 1910 from gondola car #2023.	161
602	Pullman	'00	Brill 27A1	4-GE57	2-GE K14	52,000	--	36'-11"	7'-9"	13'-8"		'30	'30	Line car, rebuilt 1911 from combine #20. Burned 4/14/30 at Highwood.	100
603	McGuire Cummings	'09	Baldwin 295	4-GE57	2-GE K14	60,000	4000 gal	31'-0"	8'-8"	11'-0"		'22	'38	Sprinkler, renumbered from #22 in 1911.	162
604	C&ME RR	'14	McGuire Cummings 20A	4-GE73	2-WH 189D	65,000	--	40'-6"	8'-9"	13'-9"		--	--	Line car equipped with posthole digger and pole setter.	164
605	Russell	'21	Russell	None	None	76,200	--	45'-0"	9'-0"	12'-6"	12/28/21	--	--	Double end plow.	161

CAR NUMBER	ORIGINAL BUILDER	BUILT	TRUCKS	MOTORS	MASTER CONTROLLER	WEIGHT	CAPACITY Thousand pounds	LENGTH OVERALL	WIDTH OVERALL	HEIGHT OVER ROOF	IN SERVICE	OUT OF SERVICE	REBUILT, SOLD OR RETIRED	REMARKS	DETAILS ON PAGE
SERVICE EQUIPMENT (Continued)															
500	Cincinnati	'23	Baldwin 78-35AA	4- WH557R5	2- WH 28A3	87,300	--	50'-0"	8'-2"	14'-1"	1/5/23	--	--	Line car.	155
507	Cincinnati	'25	Blw 78-35AA	4- WH557R5	GE R28V	131,300	50	50'-0"	8'-6"	12'-0"	1/10/25	'49	'50	Derrick car. Sold to CHF Co. and renumbered #239.	160
508	McGuire Cummings	'24	McGuire Cummings	2-GE R10 1-GE R10	2-GE R28V 1-JE R11	29,000	--	28'-3"	8'-11"	11'-2"	1/3/24	'45	'47	Single truck sweeper used in Milwaukee. Sold for scrap.	158- 160
509	Haffner-Stack	'24	Arch bar	None	None		100	42'-4"	9'-0"	15'-4"	3/27/24			Ditcher. Rebuilt about 1940 to flat car.	B-107
510	Hoskiss Blue	'25	Arch Bar	None	None		100	41'-6"	9'-6"		12/27/25		'52	Dynamometer car for tensioning catenary. Sold for scrap.	B-107
611, 612	Hoskiss Blue	'25	Arch Bar	None	None		100	41'-6"	9'-6"	3'-7"	12/7/25	'44	'44	Cable reel cars for line work. Rebuilt 1944 to flat cars.	B-107
1213	Western Wheeled Scraper Co.	'06	Arch Bar	None	None	27,000	--	22'-10"	9'-6"	7'-4"				Weed sprayer, rebuilt from side dump car. Scrapped.	--
1240	Western Wheeled Scraper Co.	'07	Arch Bar	None	None	29,000	--	22'-10"	9'-6"	7'-4"			--	Weed sprayer, rebuilt 1922 from side dump car.	163
1410	Fullman	'07	Arch Bar	None	None			37'-4"	10'-4"	11'-8"				Derrick car, rebuilt before 1920 from flat car.	--
1420	Fullman	'07	Arch Bar	None	None		60	35'-6"	8'-10"	11'-8"		--	--	Derrick car.	167
2001	Fullman	'07	Arch Bar	None	None		80	36'-9"	9'-8"	13'-4"				Ballast unloader, rebuilt 1918 from flat car. Scrapped.	157
2022	Fullman	'07	Arch Bar	None	None	89,000	--	36'-8"	10'-7"	15'-9"				Ditcher and pile driver, rebuilt 1916 from flat car. Scrapped.	--
2056	Fullman	'07	Simplex Arch Bar	None	None		80	38'-9"	10'-6"	12'-7"				Tool car, rebuilt from gondola. Made portable substation with dimensions shown in 12/1916. In service 7/1917. Made welding car.	157
3000-3002			Arch Bar	None	None		50	36'-6"	9'-5"	11'-7"				Wooden camp car, rebuilt before 1920 from box cars.	--
3003		'27	Arch Bar	None	None	29,800	60	38'-0"	9'-5"	12'-1"			'45	Wooden tool car, rebuilt before 1920 from box car. Sold to CHF Co. and renumbered #232.	--
3004-3009			Arch Bar	None	None	31,000	60	38'-0"	9'-8"	12'-0"				Wooden camp cars, rebuilt before 1920 from box cars.	--
3010, 3011			Simplex	None	None	31,000	60	38'-0"	9'-8"	12'-0"				Wooden camp cars, rebuilt before 1920 from box cars.	--
3012-3017			Arch Bar	None	None	31,000	60	38'-0"	9'-8"	12'-0"				Wooden camp cars, rebuilt before 1920 from box cars.	--

GENERAL NOTES TO ROSTER OF EQUIPMENT

Roster corrected to October 1, 1962. Compiled by James J. Buckley with the assistance of Leonard Foitl.

Rolling stock listed was owned by the Chicago North Shore & Milwaukee Railway and its predecessors in Illinois, except that cars indicated by the symbol  were owned at one time by the Chicago & Milwaukee Electric Railroad of Wisconsin. City cars through #12 were originally owned by the Bluff City Electric Street Railway Company.

A comprehensive listing of owned equipment has been attempted with the exception of two classes of rolling stock. Construction equipment used in the early 1900's and consisting principally of steam locomotives, excavating equipment, and small dump cars for the transportation of fill have been omitted. Also omitted are the smaller units of maintenance equipment—handcars, push cars, and gasoline-powered speeders used by section gangs.

The term "coach" is used to refer to passenger cars equipped with day-coach seats. Unpowered cars are referred to as "trailers." While usage of these terms varies with local conditions, in this volume they have been uniformly applied as outlined.

Cars listed with Westinghouse 28A master controllers had type HLF multiple-unit control systems. Those shown with General Electric C6 master controllers had the type M system.



City Car

First move of a streetcar built for Waukegan through the streets of that town! Car #3 required hauling by a team of horses from the Chicago & North Western Railway siding (at left) to the streetcar tracks. #1 and #2 were still on railroad flatcars. (WDR)



CITY CARS 1-4

First cars built for the Waukegan streetcar company were single-truckers 1 to 4. Although lettered for the Bluff City Electric Street Railway Company, they were delivered to Chicago & Milwaukee Electric Railway Company, which had purchased the property in the meantime.

For the first year, car 4 served on the isolated line south of North Chicago Junction and carried "Highland Park-Highwood-Fort Sheridan" signs for that section. The entire series was out of service by the early 1900's, with two of the cars seeing further use in work service.

1-4

Unveiled and ready for service, #3 shows off its 1898 styling. Mustachioed gentleman holding his baby is Clarence Murray, a founder of the company. (GK)

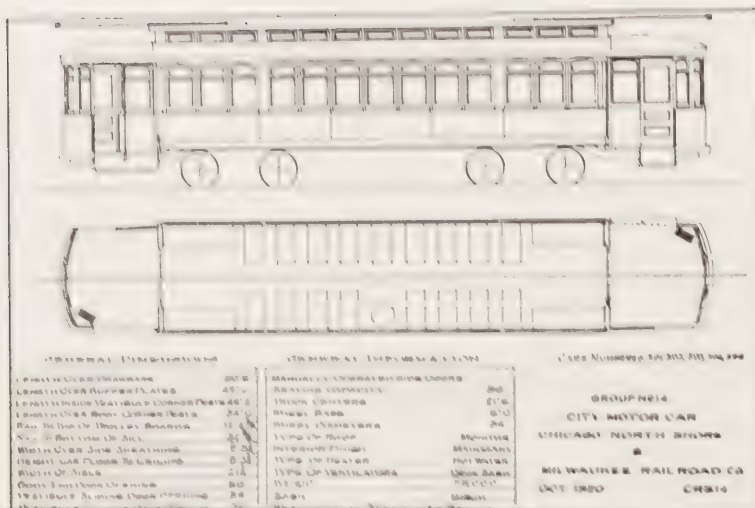
Along a roadside--perhaps in North Chicago--one of the series paused for a photo while the few passengers relaxed inside. Adjustable board partly hidden by front step, standard equipment on these early cars, served to clean out the flangeway. (WBG)





Other city equipment of approximately the same age as cars 1-4 included the 5-12 series. One car is seen (at left) making its leisurely rounds in downtown Waukegan. (BN)

Single-truck open trailers, which saw most of their use in Waukegan, appear in an 1899 view of the Highwood yard. (GK)



Cars 500-

Mechanical department drawings of principal car types are reproduced (in reduced size) to show general layout of cars and some strategic dimensions. The one at left covers the two-man 500's. "Group numbers" appearing had been assigned by the railway for inventory purposes. (GK)



In the standard dark green paint of the early years, Milwaukee city car #505 stands on the single-track main line at Harrison Street awaiting departure time for a northbound trip. The other car is on the lead to the car barn, which is just out of the picture to the right. (PS)

A 1923 photo (below) caught the 501 in the yard south of the Milwaukee car barn.

By this time, Birneys were providing the city service and the 500's were in semi-retirement. Cars in background, from left to right: sprinkler 603, box 3005, sweeper and line car 70, and box 3008.

509

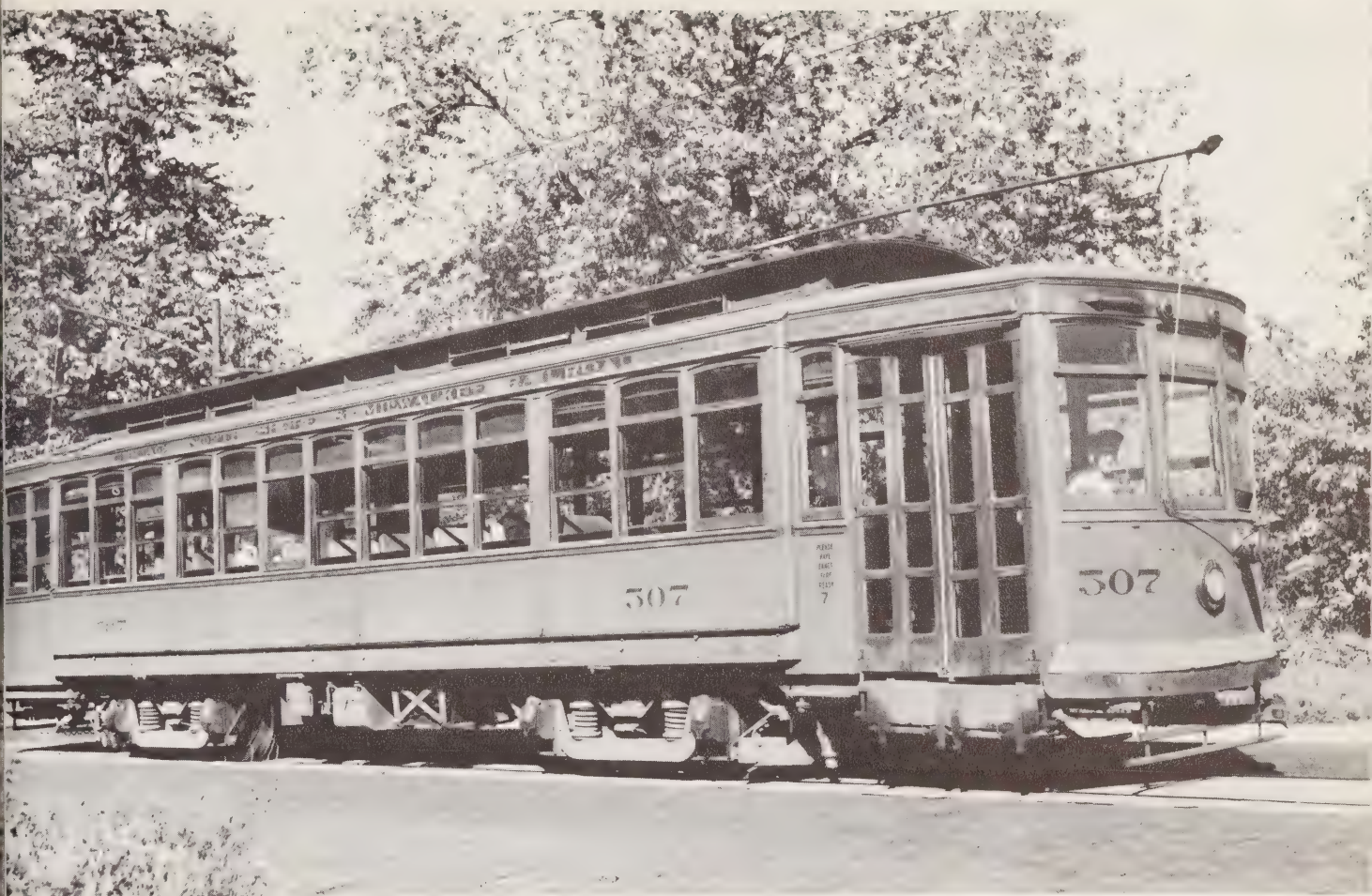




Still a two-man car, but painted in the orange-and-maroon color scheme of the 1930's. (GK)

The coal stove dominated the interior of 500-type cars. An unusually large-capacity car for its time, #500 seated 52 passengers as arranged for two-man operation, or 58 with platforms rearranged for one-man service. Latter stage is shown below in 1941. (JJB)





Even in the 1940's, the old cars came out when necessary to handle peak-traffic periods in Waukegan. Car 507 (above) is shown at Grove and North on September 7, 1941, near the beginning of a trip to Great Lakes Naval Training Station. (JJB)

CITY CARS 500-509

The 29-38 series of interurban cars was being used in city service about 1908, since these operations had outgrown the single-truckers shown on the preceding pages. A more efficient car than the 29 type with its narrow doors was clearly to be desired and came with introduction of the 500-class cars to Milwaukee in 1909.

Designed expressly for pay-as-you-enter (PAYE) fare collection with the conductor stationed on the rear platform, these cars utilized the large vestibules which were characteristic of streetcar design of the period. Also notable was use of some channelization to improve passenger flow from the rear entrance into the car and then to designated exit doors at either end.

The 500 series was owned by the Chicago & Milwaukee Electric Railroad of Wisconsin and, like others used in Milwaukee city service before and since, were merely leased to the local Chicago & Milwaukee Electric Railway, whose name they carried.

Some cars of the series (numbers 500, 502, 504, 507, and 509) saw conversion to one-man operation in the early 1920's, when they were transferred to Waukegan for tripper service. Even the cars that still required two men filled in whenever unusually heavy loadings required it. The huge capacity of the 500's made them an ideal backstop for Waukegan's little single-door Birneys, which could not readily have handled the peak-traffic periods without assistance.



City Cars 313 and 315

Downtown Waukegan in 1937. One-man car 313, like sister car 315, frequently handled the Washington Street runs. Note step light left over from two-man days, still serving as a tail light. All city cars had brackets for interurban-style marker lamps and flags, since much of the city-line mileage was shared with interurban cars. (FEB)

CITY CARS 313 AND 315

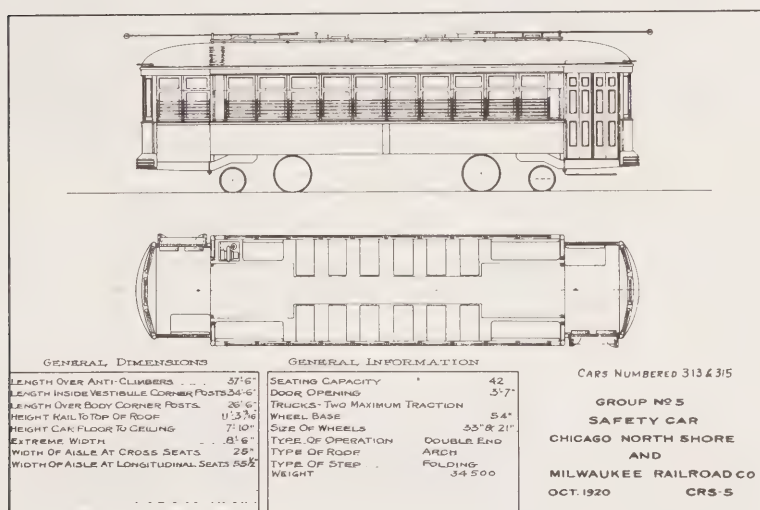
The medium-size city car typical of new construction in the immediate pre-World War I period came to North Shore Line's Waukegan operation as numbers 313 and 315. Although some wood was used in the car bodies, principal structure was of steel. Thus the cars represented a more modern design than the railway's 500-class city cars.

Secondhand from Oswego, New York, where they had served the Empire State Railways for only two years, the cars retained their original numbers. Initially they operated in two-man service but were soon rearranged as North Shore Line's first one-man city cars. Normal assignment was the Washington Street line, which required two cars to handle its usual 10-minute headway.

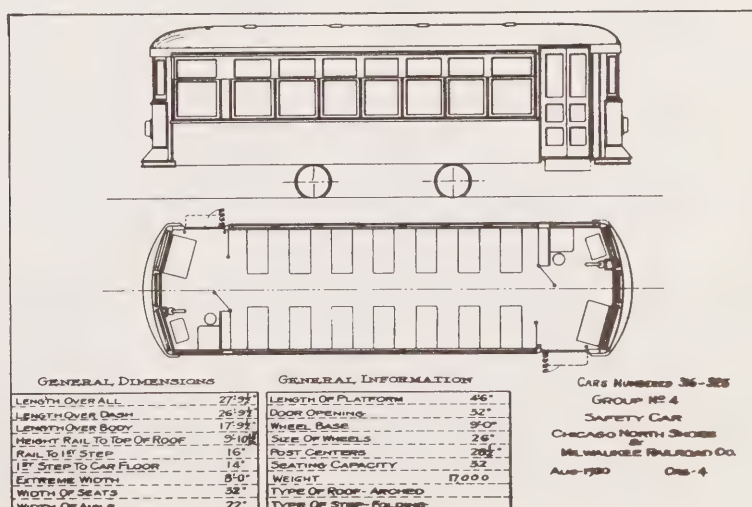


Awaiting an assignment at the North Chicago carbarn. Maximum-traction trucks, with large driving wheel and smaller leading wheel, were seen on North Shore Line only under the 313 and 315. (JJB)

Floor plan (immediately below) emphasizes short length of these cars.



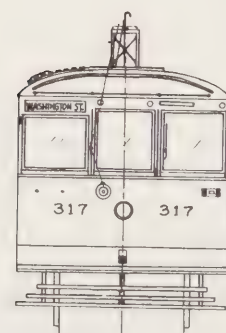
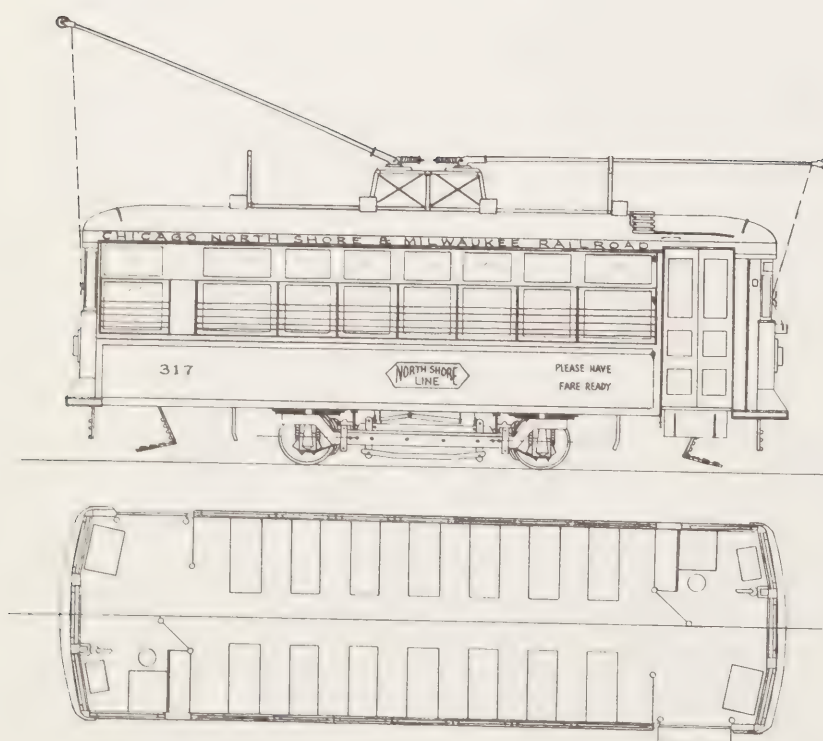
Even smaller cars than the 313 and 315 came to the property in 1920 with acquisition of the Birney cars numbered 316-325. For additional details, see the next page.





Birneys 316-325

Waukegan Birney #317 in the green and orange colors of the early 1920's. (G)



Drawing: CWG

Scale in feet

35 mm = 1 foot
0 5 10 15

An improved Birney (at right) as one having enough doors that "Exit" and "Entrance" could be specified. (WDR)



BIRNEYS 316-325

North Shore Line purchased a fleet of ten Birney Safety Cars to handle the base service in Waukegan and North Chicago. Like many other streetcar operators of 1920, the railway welcomed the lightweight construction and one-man operation of these small cars.

These "single-door" Birneys served mostly on the Great Lakes-Waukegan run, but could be and were occasionally sent to Milwaukee for service on the city line there. Retirement came in the 1930's, with larger Birneys and even newer double-truck steel city cars being selected to handle city operations in later years.

BIRNEYS 326-337

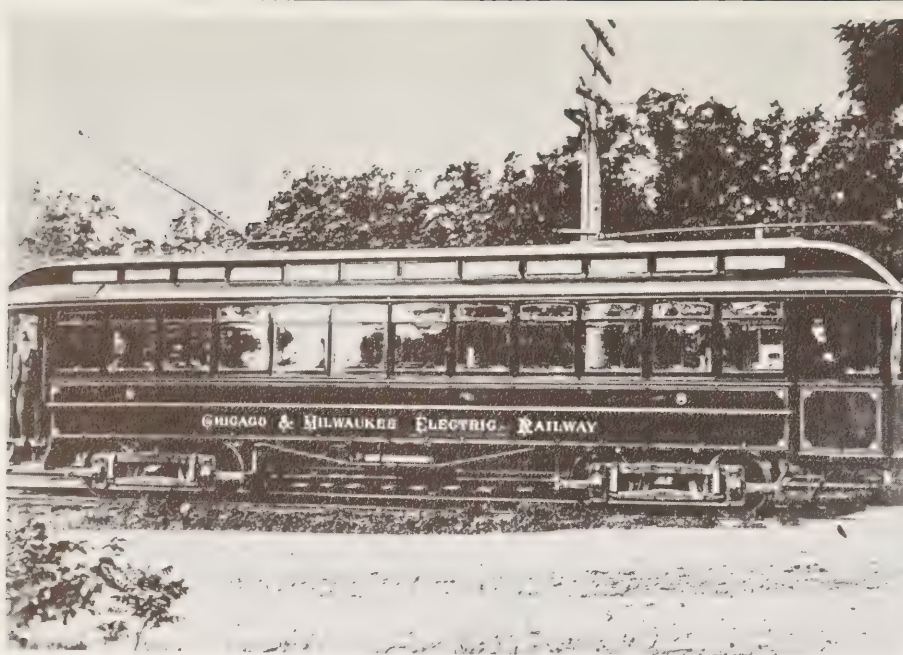
A few years' experience with cars 316-325 suggested that somewhat improved loading speed would be desirable. The result was the "double-door" Birneys, numbered 326-337, which were purchased in 1923 to replace 500-class wooden cars on the Milwaukee city line. Careful design fitted the additional loading space into a car only two feet longer and a ton heavier than the small Birneys.

Most of these cars' careers were spent on the subsidiary Chicago & Milwaukee Electric Railway, for which they were lettered, but some served in Waukegan during World War II.

The 336 pauses at Harrison Street stop on a southbound trip in the autumn of 1941. (JJJ)

Birneys 326-337





On North Shore Line, lengthy (for the 1890's) interurban-style route came first and cars that could properly be classified as interurban rolling stock followed. One such early car was #8 (at left). Like identical #7, it was made from the bodies of two single-truckers spliced together. Hauling three or four trailers with one of these units was not rare.

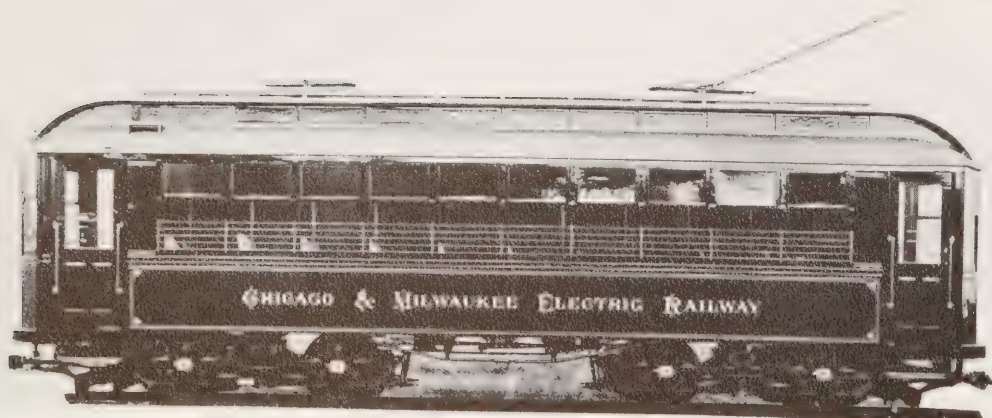
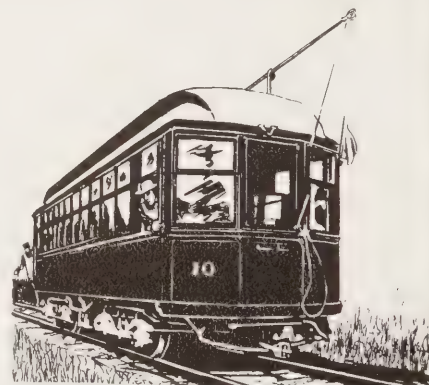
Coaches 7 and 8

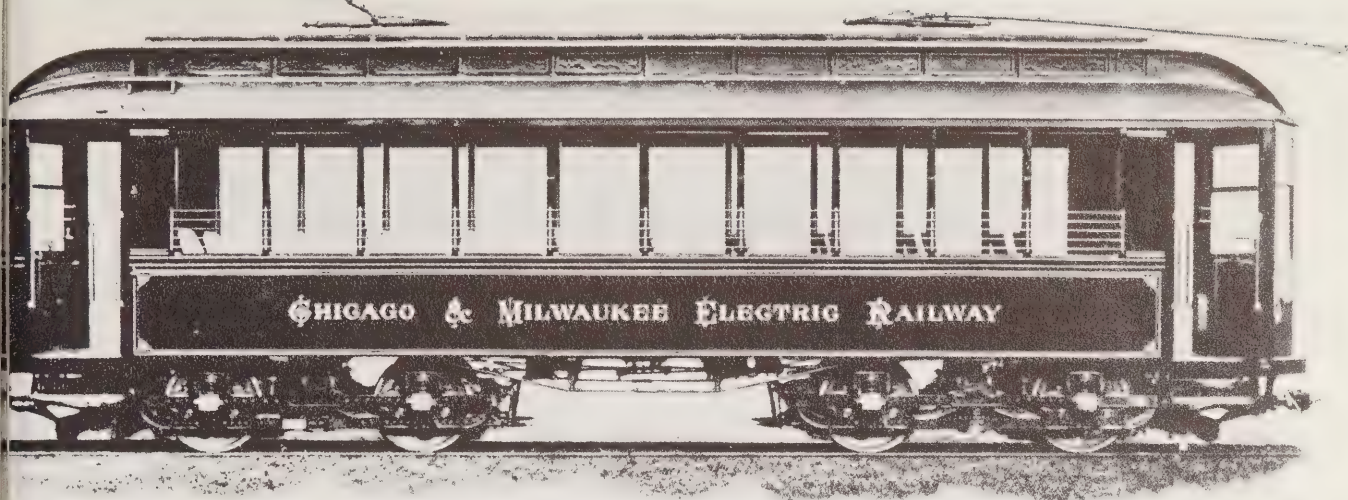
Coach

Pioneer order for double-truck cars was awarded to the Pullman Company in 1899. Result was a neat style of car, taller and heavier than the city car of the period but bearing a certain family resemblance.

Closed cars of the style shown here included two straight coaches, numbered 9 and 10, and two combination coach-baggage units (page 104). Some 14-bench open trailers purchased about the same time meant that one of these motor cars could handle a train with a capacity of over two hundred persons.

Both views on this page show #10. (GK)





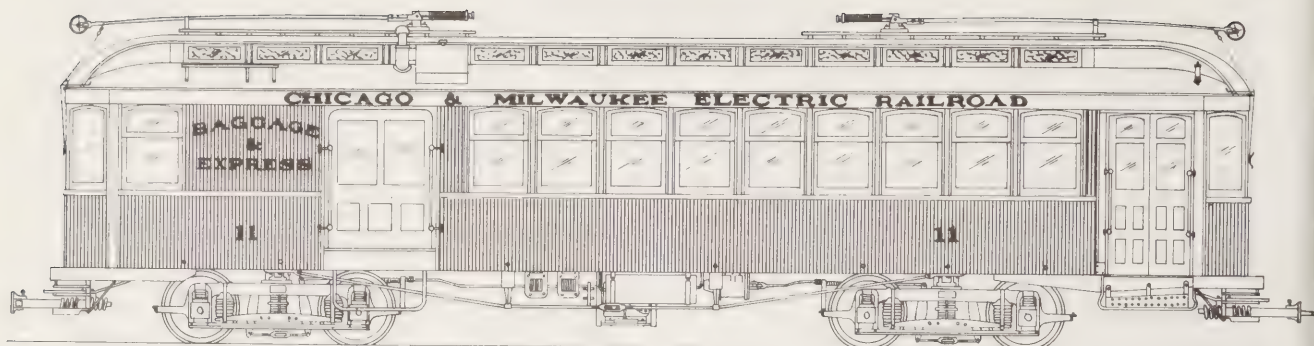
Another builders' view of an
1899 Pullman coach. (GK)

and 10

Units bearing next higher numbers,
although not the next cars to be
obtained, were Brill-built #11 and
#12. These had a long, varied
life, as evidenced by the data on
the following two pages. (GK)

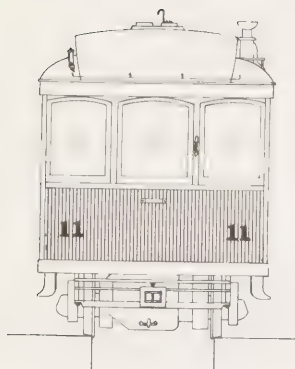
Combines 11 and 12





Combines

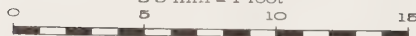
11 and 12



Drawing: LF

Scale in feet

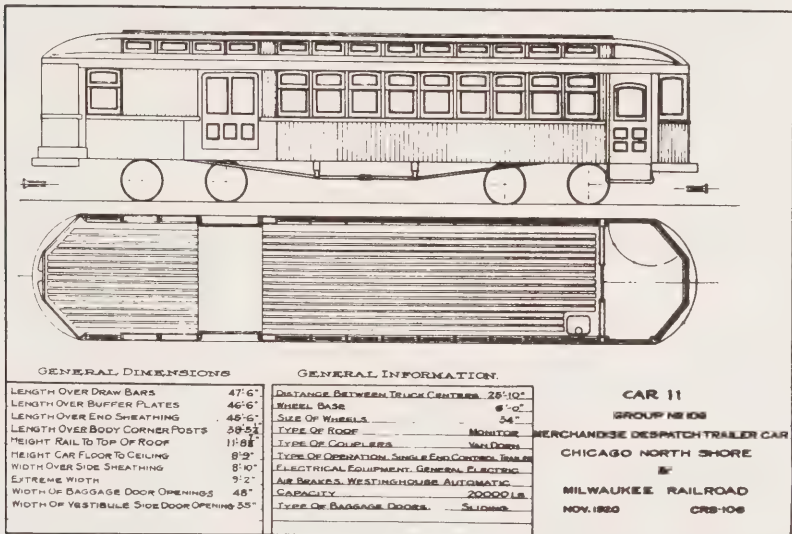
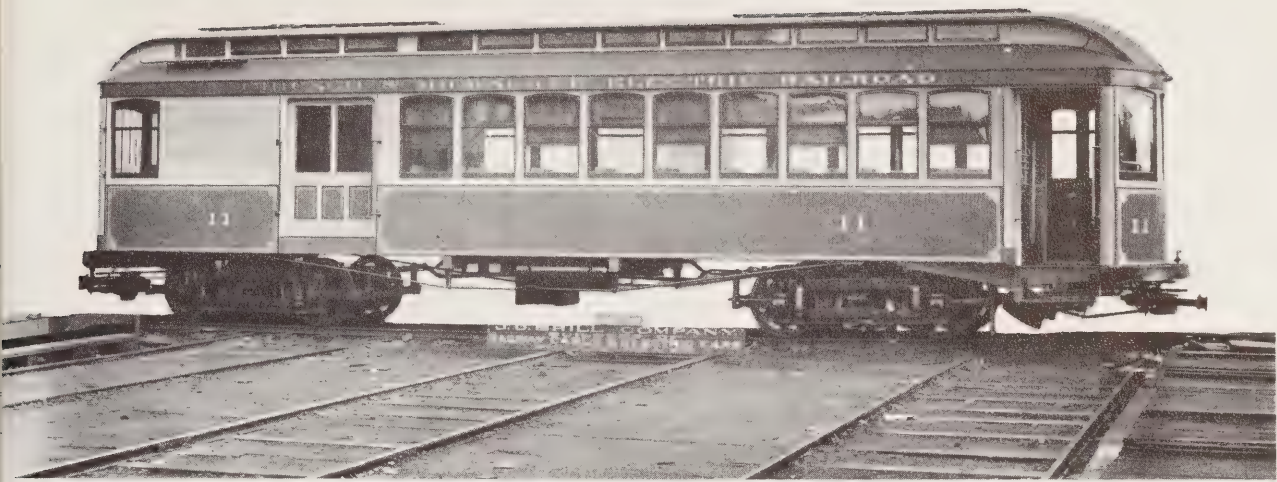
35 mm = 1 foot



These combination passenger-baggage units were Chicago & Milwaukee Electric's lowest-numbered but not first combines, numbers 13-22 and 30 having actually come earlier. The 11 and 12, however, were the larger units purchased in 1902 when the express service was being emphasized.

Becoming obsolete in passenger service as newer multiple-unit cars were purchased for

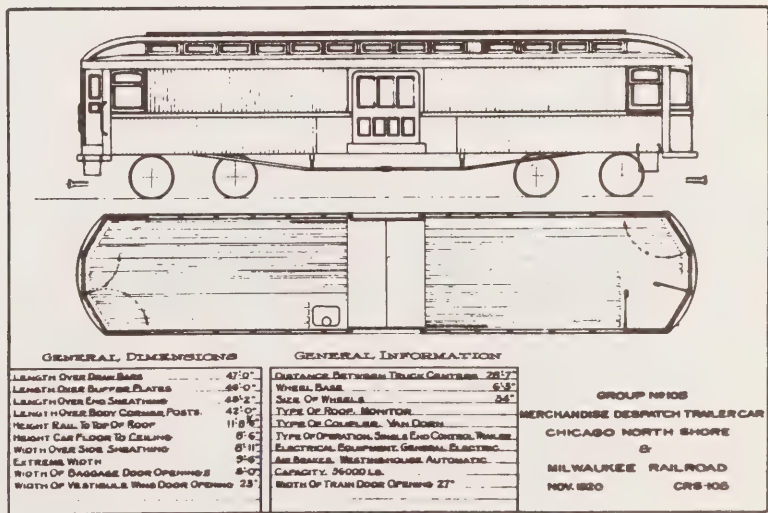
train operation, 11 and 12 were converted for hauling of baggage exclusively. Car 12 was extensively rebuilt in 1910 for use as an express motor, while #11, converted in 1917, retained its original appearance more closely and served as a trailer in merchandise dispatch trains. Eventually both were trailers and served as such until an adequate number of newer MD cars were available in the mid-1920's.



Car 11 started out its history (above) with most of its interior space used for the passenger compartment. (P)

However, a complete change came about with its conversion to merchandise dispatch haulage (at left).

Car 12 as a combination baggage car was similar to the 11, but it was more elaborately rearranged for the merchandise dispatch service (at right).





The 1900 Pullman builders' view above is the only evidence of named cars on North Shore Line. Perhaps the dedication of #14 to Glencoe was only temporary. (ADD)

Car 22 a few years later (below) had already seen a concession to practicality—a less ornate style of lettering. Note variation in number of side windows among cars of the same series. (GK)

Combine



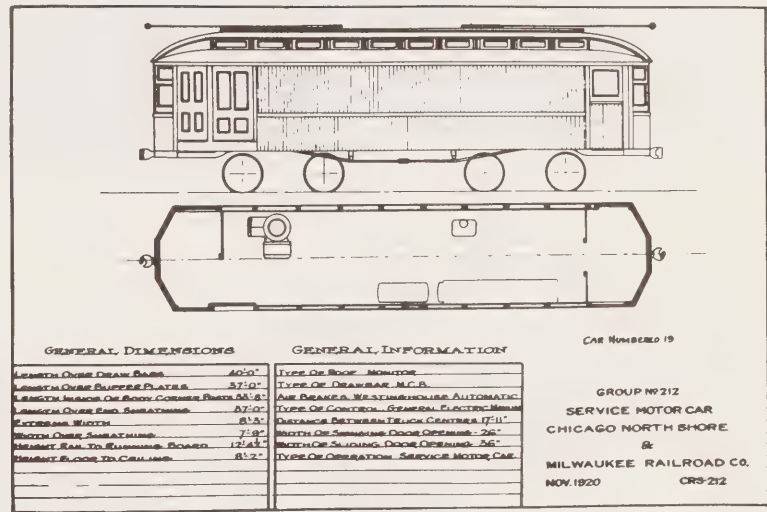


Cars as small as the 13-22 soon became obsolete for interurban passenger service. Other uses for the equipment were readily found, however. Car 19 was thus able to continue serving the railroad for years.

At top, still in passenger service, shown at Franklin and North in Waukegan. (GK)

Conversion to a work motor (at right) came in 1911.

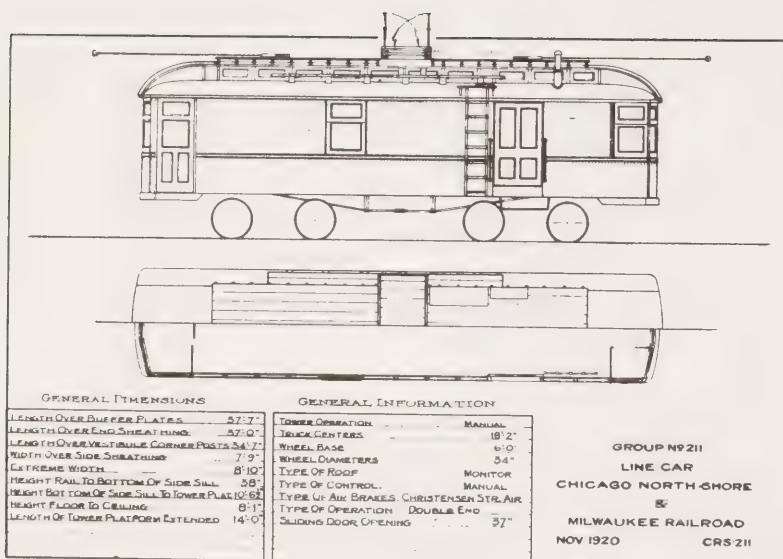
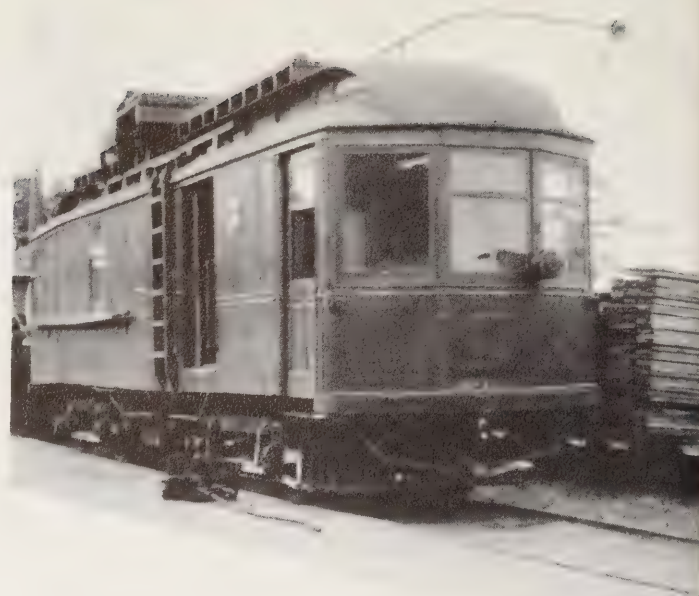
3-22



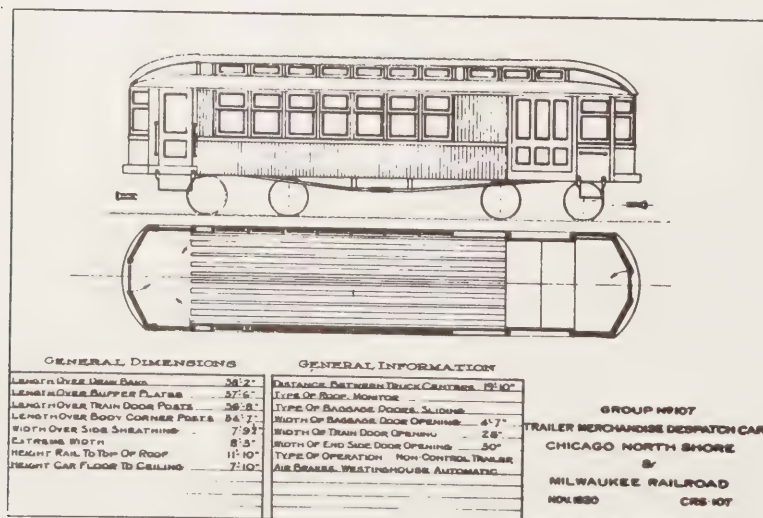
By the 1930's, car 19 could frequently be seen (below) on the "emergency track" at Highwood yard, with the company office building in the background. (GK)



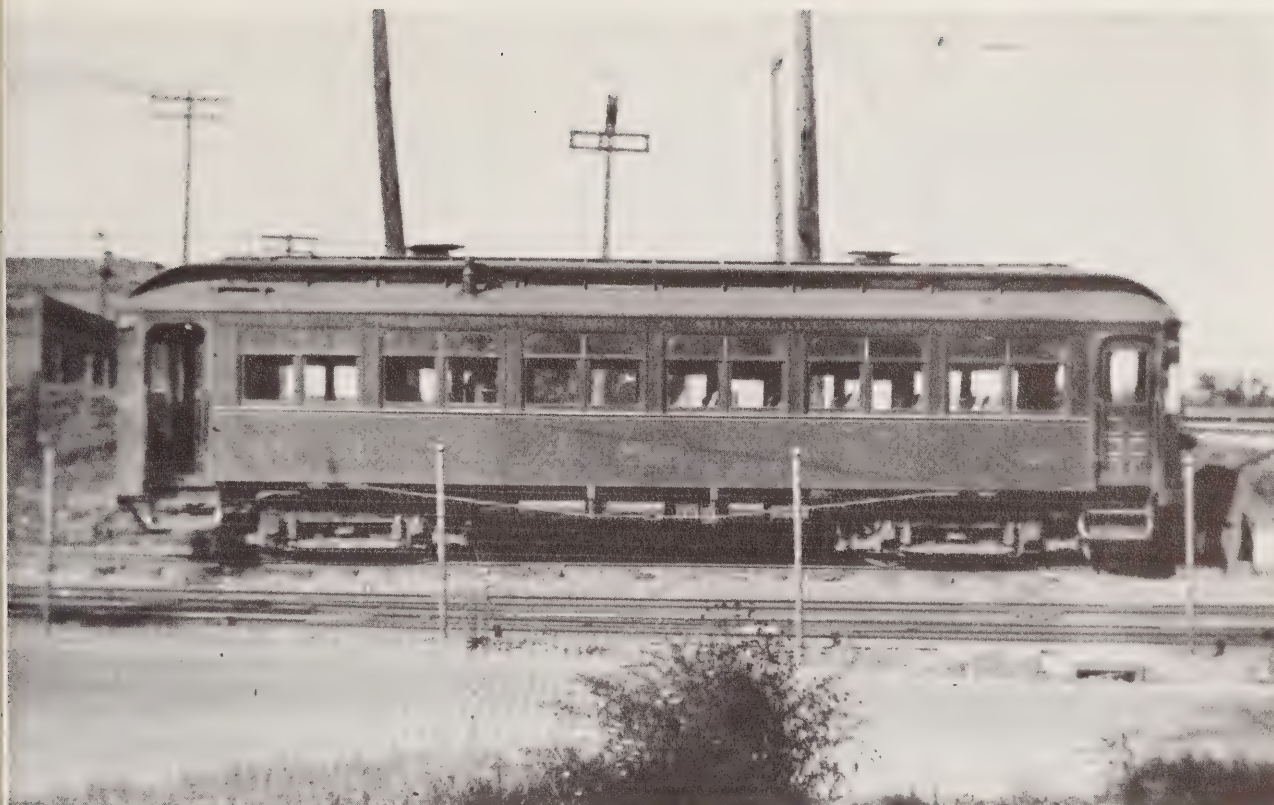
Another of the 13-22 type combines, #20 saw re-building as line car 602. (WDR)



As a line car, the 602 had a platform which could be extended out to either side several feet but not raised above its normal height. (WDR)



Still another conversion of a coach-baggage unit to non-passenger service involved #16 (at left).

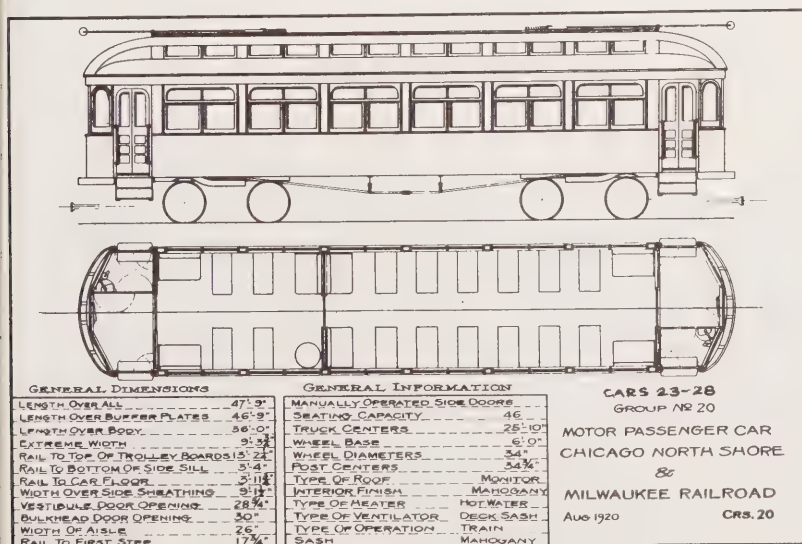


COACHES 23-28

The six Jewett-built cars of 1904 brought to North Shore Line for the first time the handsome styling which came to be typical of the wooden interurban car in the Midwest. Approximately the same size as the 1902 Brill combines but equipped as straight coaches and designed with arched windows in pairs, the Jewetts gave the

impression of being a longer and more substantial car.

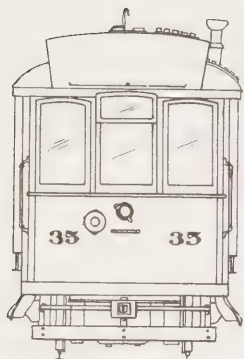
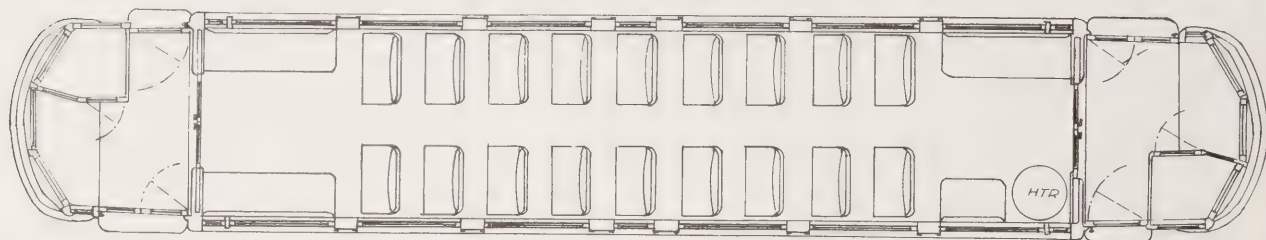
Also new to the property was the type M multiple-unit control with which these cars were equipped and which later became standard on the line's wooden cars. Introducing this type of control permitted handling single-end-control summer trailers 62-67 as well as allowing use of motor cars in trains.



Coaches 23-28

Seldom seen in photographs are cars of the 23-28 series, like #28, shown (above) at Church Street terminal, Evanston. (FB)

Note mounting of master controller (at left) to one side of the cab area to make the best possible use of a rather short end platform.



Drawing: LF

Scale in feet

3.5 mm = 1 foot



Coaches 29-38





Tripper service on the Waukegan-Great Lakes city line was the assignment of #32 (above) when photographed on the track leading out of the carhouse. (GK)

Redrawn from a company plan long after the 29-38 series had been retired, the drawing at left nonetheless reproduces even the "group number" assigned by the railway for inventory purposes.

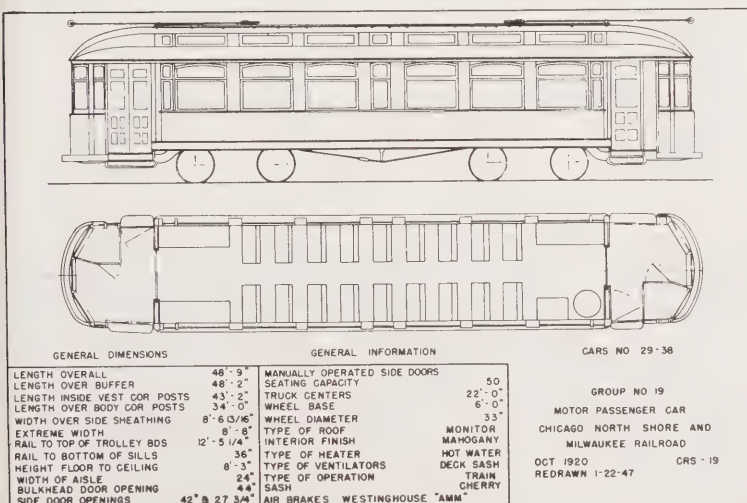


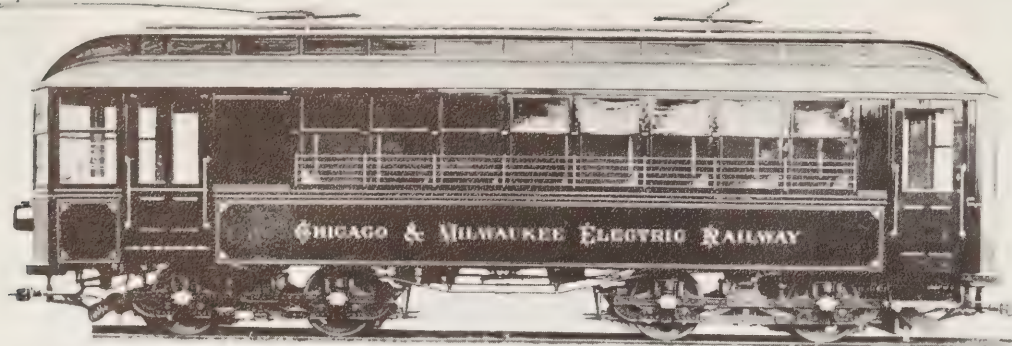
Photo of #35 (opposite page), taken on the track along Sheridan Road behind the Highwood office building, dates to the middle 1920's. (GK)

COACHES 29-38

Cars 29-38 followed the "Robertson" design for which St. Louis Car Company was known in the years around 1905. Many of the Robertson cars were built for Midwestern streetcar systems, and those on North Shore Line operated largely in city service although intended as interurban cars.

The 29-38 were shipped to Milwaukee and leased to the Chicago & Milwaukee Electric

Railway for the opening of city service there. After arrival of the 500-type city cars, the 29 series again served in Waukegan and, when needed, in local interurban service. For a time in the 1920's, car 30 was used by the Chicago Aurora & Elgin Railroad on its Bellwood - Mt. Carmel shuttle. Most of the series was in dead storage by this time, but cars 29, 31, and 32 remained as trippers on North Shore Line, running up only a few hundred miles a year until 1928.



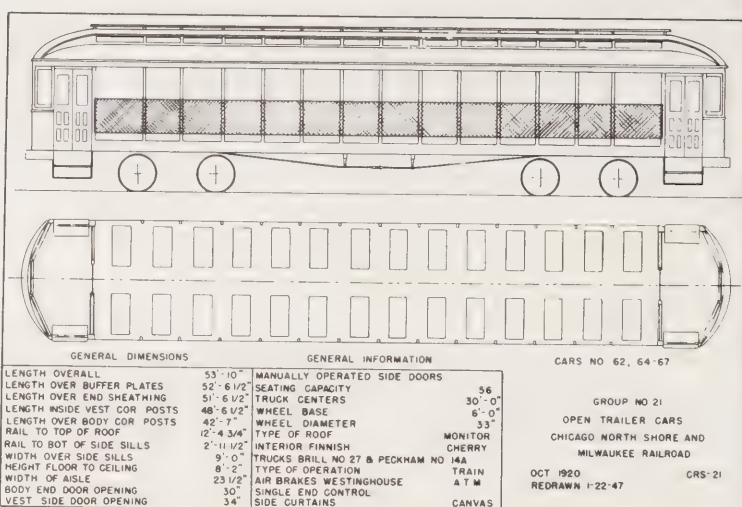
Car 30 (above) and an identical unit whose number is unknown were the railway's first combines in 1899. Color scheme at the time emphasized blue with gold lettering and striping; C&ME intended to become known as the "Royal Blue Line." (GK)

Combine 30

Coaches 62-67

Fourth and last order of open trailers numbers 62-67 featured such refinements as enclosed vestibules and single-end control.

In view of #63 (below), deck-roof double-truck open trailer visible in the distance represents an older series of summer equipment. (PS)





COACHES 75-82

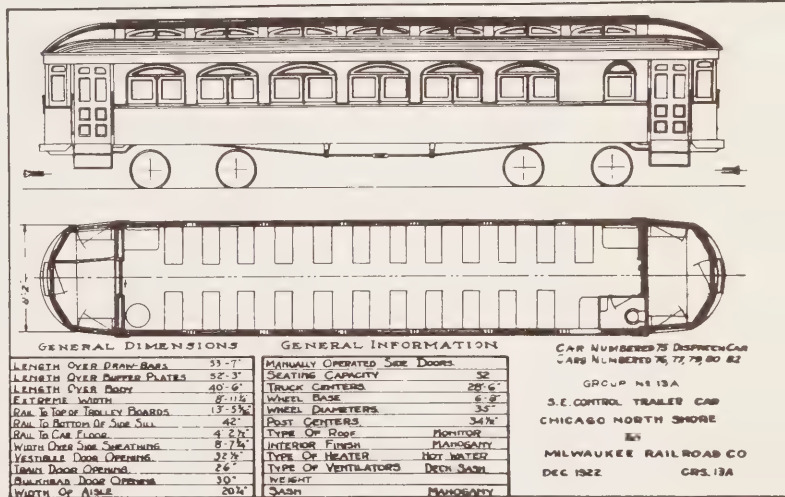
"Closed trailer" in the days of wooden cars on North Shore Line meant the eight cars of the 75-82 series. Built at the same time as the last of the road's wooden motor cars, this class followed the substantial design standards of the 1910 era. As the cars were not intended for service on limited trains, however, they were equipped with rattan-upholstered walkover seats like the older cars.

Control cabs were installed at one end of each car, as in some of the open trailers, to permit a motor car pushing instead of pulling its trailers when operating in one direction. Thus the necessity of "running around" the trailers at each terminal was eliminated.

The cars originally had full-width vestibules which exceeded the clearance limitations imposed by sharp curvature on the elevated tracks in Chicago. A slightly tapered vestibule was therefore developed to permit use of the cars south of Evanston after trackage rights over the "L" were obtained in 1919. Car 81 also obtained plush seats at some time during its history.

Most of the series served trippers as needed and then saw a period of storage during the 1930's, but #75 had seats removed and windows screened for use in merchandise dispatch service. As no baggage doors were added, the unit was apparently limited to handling of small parcels.

Coaches 75-82



Coaches 100-103



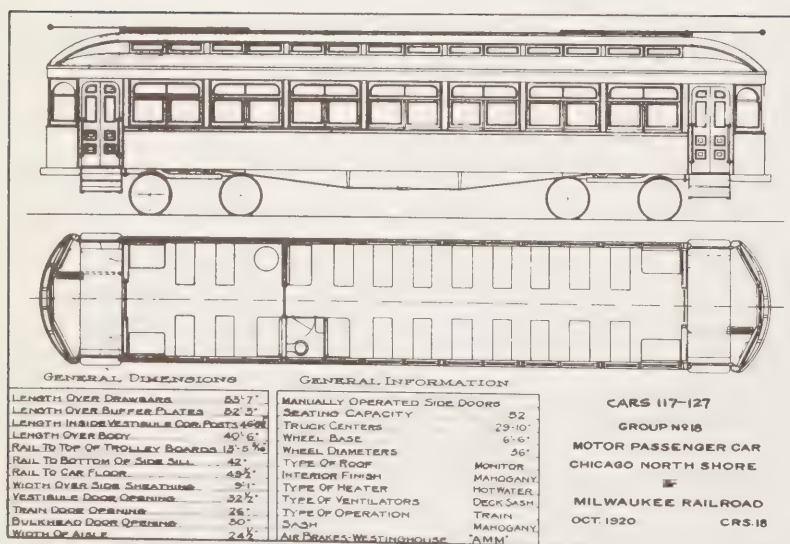


Summer scene with #118 and two trailers of 62-67 class (at left) indicates the way Sunday and holiday traffic was handled in the era of the Jewett-built wooden interurban car.

Car 118 again (at right) was more than adequate for weekday riding, even without the use of trailers. August 1917 photo was taken just north of Evanston terminal. (SDM)



Coaches 117-127



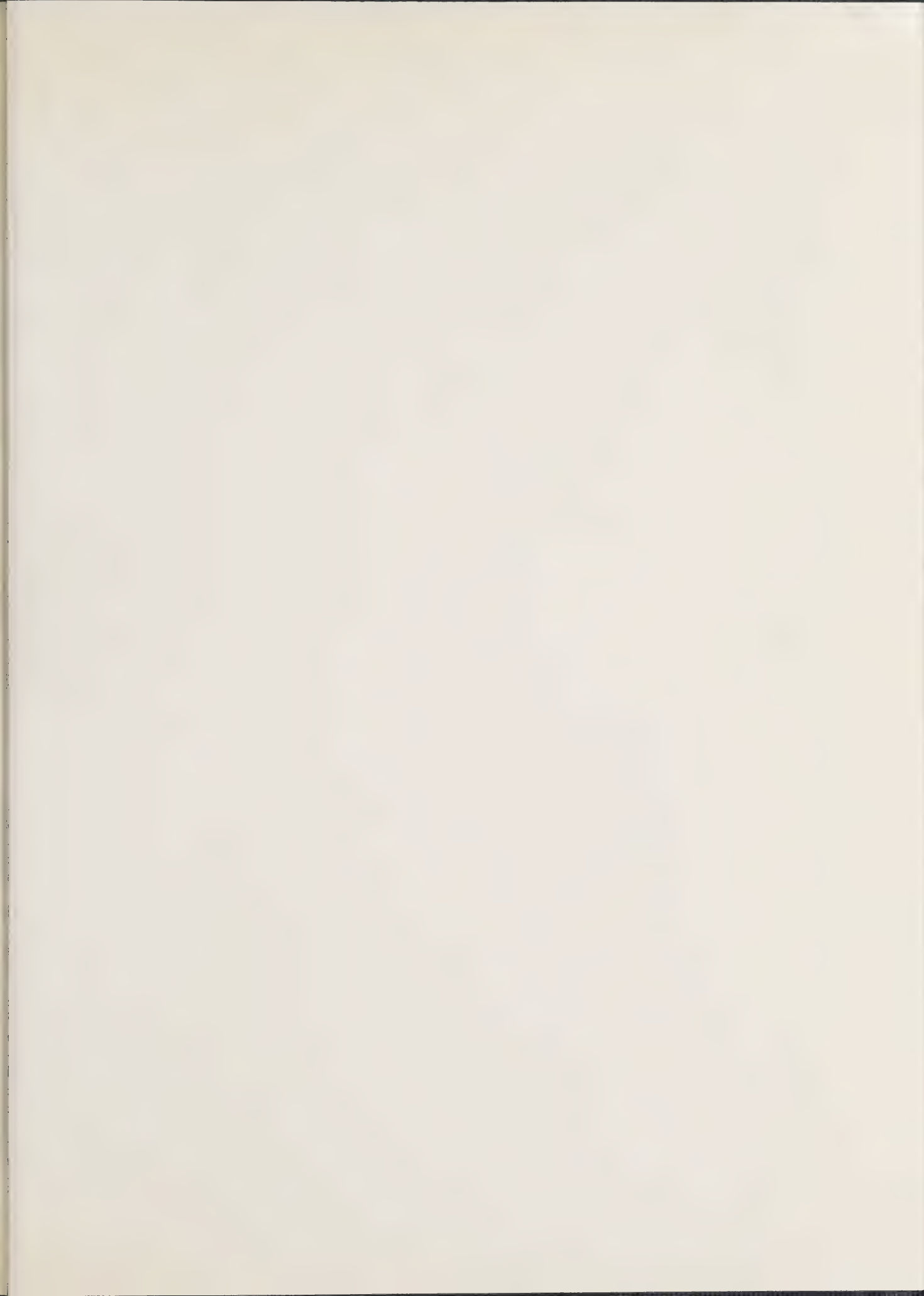
COACHES 117-127

The ten cars of the series which was originally numbered 118-127 made up North Shore Line's first set of 52-foot motor cars, a length that came standard throughout the days of wooden cars. Previously only some open trailers had been as large.

About 1914, end doors were added to aid operation in multiple-unit trains.

Car 125 was involved in a street accident early in its history and was renumbered 117 to the memory of that occasion fade away.

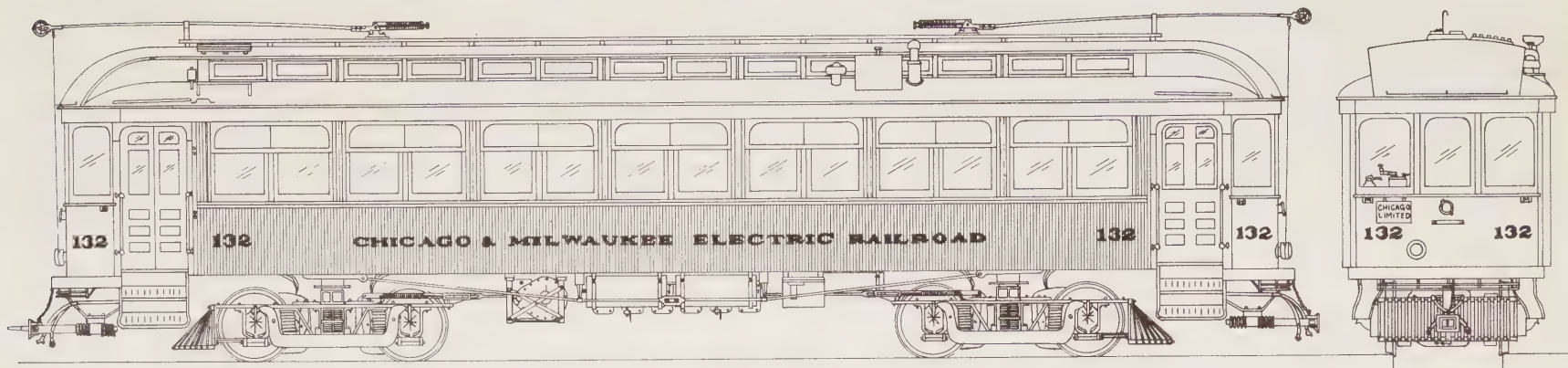
The 117-127 series was restricted to service north of Evanston by its extreme width of 9' which would not have cleared platforms on Chicago elevated lines. Consequently third-shoes, which were required for current collection on the "L," and trip-cock levers associated with the elevated's automatic train stop junction-point signals, were not added to the series. The cars served principally on Evanston-Waukegan locals until traffic decline in early 1930's permitted their retirement.



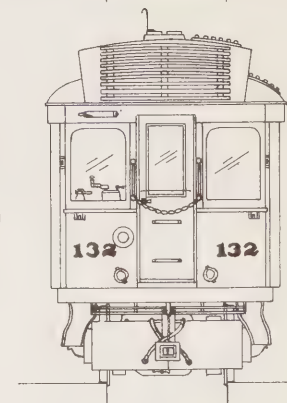
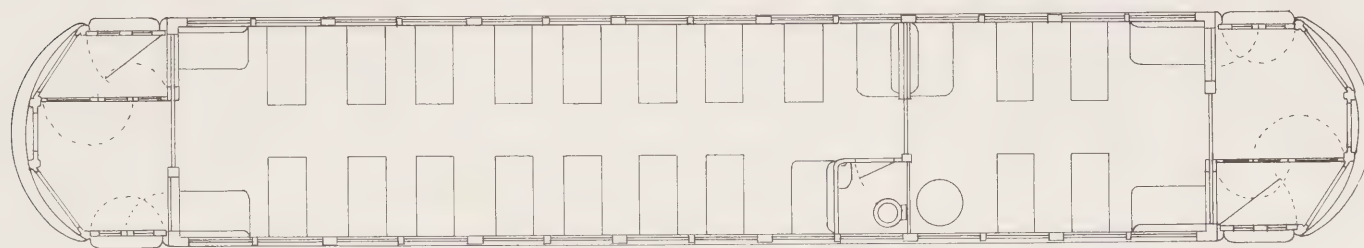


Chic 102 looks up a Green working at Riverside Park on the

Car 132 heads up a train waiting at Ravinia Park for the outflow of passengers from a musical event. The consist is completed by trailers 78 and 77 and motor car 302. Circa 1912. (GK)



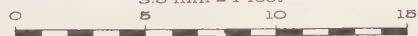
Floor plan, side elevation, and upper end elevation show car before train doors were added



Drawing: LF

Scale in feet

3.5 mm = 1 foot

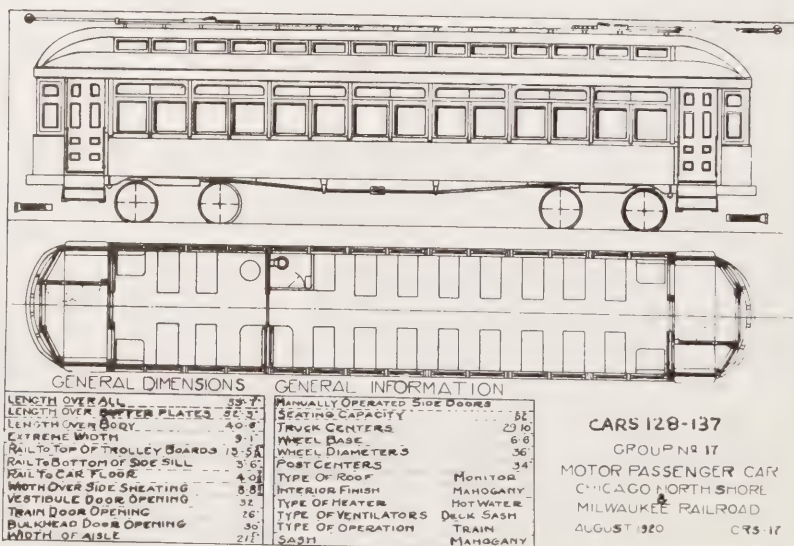


Coaches 128-137



In front of the Chicago Milwaukee & St. Paul Railway depot at Evanston within a few years of delivery, car 137 displays the handsome styling of the Jewett-built coaches on North Shore Line. (FB)

Mechanical department drawing (below) covers the period after train doors were cut into car ends.





COACHES 128-137

The 1907-model cars were practically a re-order of the 118-127 built in the preceding year. A slightly narrower car was, however, permitted by narrowing the aisle by three inches.

Like their predecessors, the 128 series cars received train doors at each end when it became clear that this would improve operations by permitting train crews access between adjoining cars. Redesign of the vestibule outline, with width over the corner posts reduced to 8'-2", was accomplished. Current collectors for use on the third-rail Chicago "L" lines were hung on the trucks about 1919. Thus the 128 class represented the oldest of the passenger cars equipped for operation to and from downtown Chicago.

Passenger car requirements on North Shore Line decreased about 1930. Freed from active

duty, six of the cars were leased to the Chicago Aurora & Elgin Railroad, whose fleet was being overworked by increasing suburban commuter traffic.* At this time, the third rail devices, trolley harps, headlight circuits, cab heaters, window wipers, and conductors' signals were replaced with fixtures of CA&E design. Foot gongs, sand systems, and motorman's cab partitions, not required by CA&E, were removed. Electric heat and storm sashes were installed to replace the hot water heating systems used by North Shore Line. It was also necessary to raise the couplers and to install power jumpers between cars to meet conditions on CA&E.

About 1945 the cars were gradually returned to North Shore Line and operated briefly there. In 1946, however, they were sold to the CA&E, where they finished their varied careers of nearly half a century.

*See CERA Bulletin 105, "The Great Third Rail."

Modified for compatibility with cars of the Chicago Aurora & Elgin Railroad, to which it had been leased, car 134 again operated on

North Shore Line early in 1946. View at right shows it passing St. Mary's on a Mundelein special. Color scheme was CA&E's red and blue. (GK)



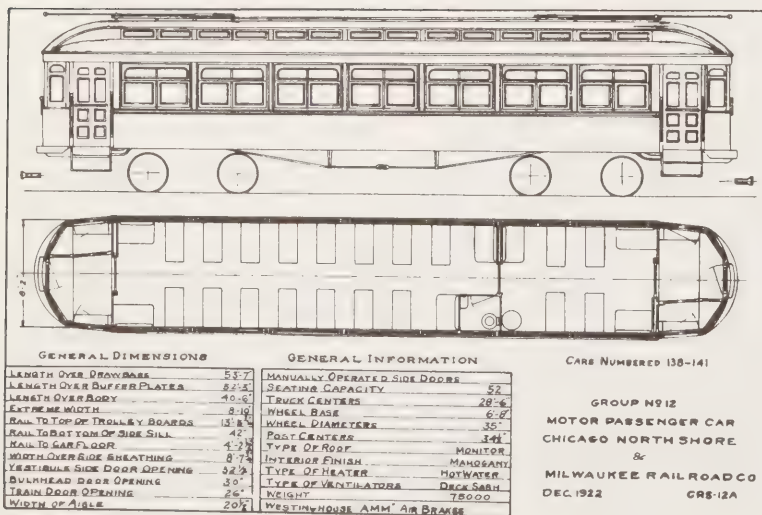


COACHES 138-141

These four cars, last of the 100-series wooden coaches to be built, followed the styling of the Jewett-built cars 118-137 rather than that of the 75-82, 303-305, and 403 with which they were built. One principal change, however, was that the 138 type was initially equipped with end doors.

Like cars 128-137, this set received narrowed ends and third-rail equipment for Chicago-Waukegan service. All four cars were leased and eventually sold to the Chicago Aurora & Elgin Railroad. On that line they handled commuter runs until 1954.

Coaches 138-141



American Car Company origin of these cars is evidenced by that company's characteristic treatment of roof design, with the end of the roof projecting several inches beyond the vestibule (at top of page). (GK)

More recent view (immediately above) no longer shows this projection, which was removed in a reconstruction by the Highwood shops. (RVM)

Drawing (at left) also shows the later stage. Vestibules had received a new shape to assure adequate clearance for operations over the Chicago "L."

COMBINES 200-202

The interurban cars numbered in the 200, 300, and 400 series were originally owned by the Chicago & Milwaukee Electric Railroad Company of Wisconsin. Intended primarily for service on Evanston-Milwaukee Limited trains, they were more luxuriously appointed than the 100-series wooden coaches.

A handsome design including art-glass upper-sash windows of a semi-elliptical shape characterized only these cars and a set of eight coach trailers. Walkover seats were upholstered in plush instead of in the rattan used in other cars.

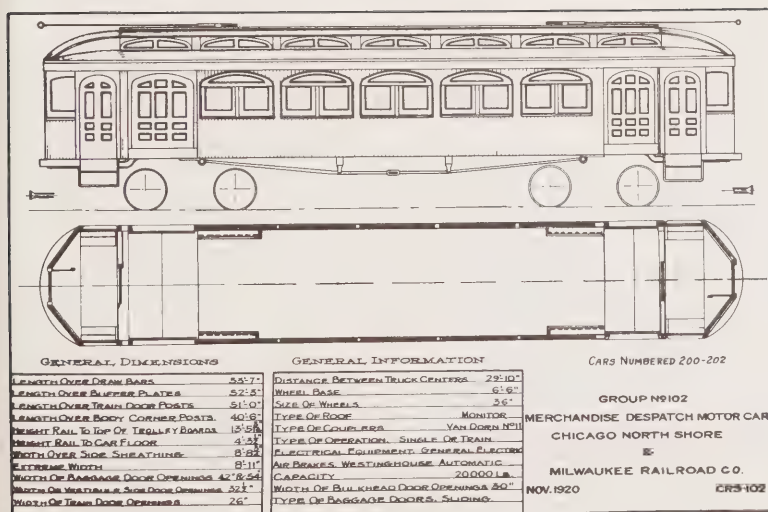
Combination passenger-baggage cars 200-202 were supplanted by steel combines received in 1917. The 200's saw continued use, however, as merchandise dispatch cars. For this service an additional baggage door was cut into each side.

Car 201 eventually was equipped with snow plows, while the 202 was assigned to use as a supply car for handling company materials.



Combines 200 - 202

Photographs of the 200-class cars in passenger service are rare, although a few appear elsewhere in this volume. After all, only eight years lapsed between the delivery of the units to the property and their conversion to merchandise dispatch cars. This rebuilding included enlarging the train doors (above), thus destroying the beautifully arched end design. (GK)



Side elevation (at left) indicates where the second baggage door on each side of the car was added in place of a pair of windows. The new, wider door was, undoubtedly, an advantage in LCL service.



Photos on this page make up a complete pictorial roster of the 200-class former coach-baggage units. Built by Jewett in 1909, they were early converted for forms of activity other than working in passenger trains.

Top: Merchandise dispatch motor #200. End of car in the foreground was the original baggage end. (GK)



Center: Car 201, shown in 1941 as converted for duty in light snowstorms. (JJB)



Bottom: Supply car 202 served to haul materials for railroad use after it was no longer needed for merchandise dispatch. (JJ)



The interior arrangement of an interurban car proved to be suitable for its use as a lecture hall. At time of photo, #301 was assigned to exactly that job, being used for the indoctrination of section hands in safe working practices. (ET)

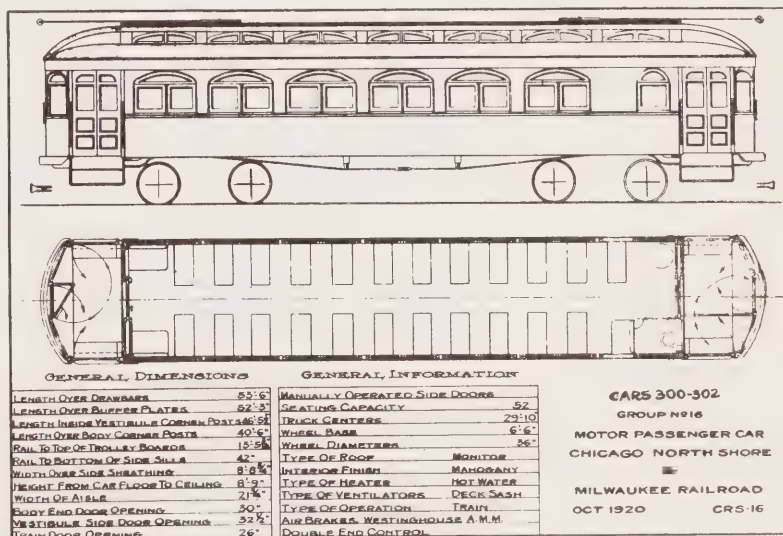
Coaches 300 - 302

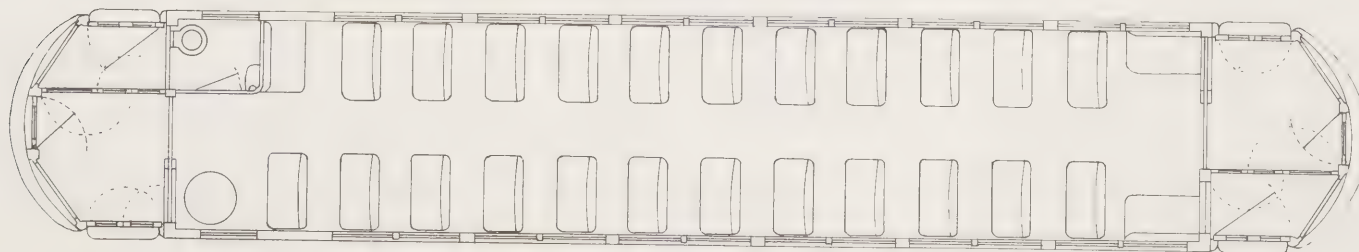
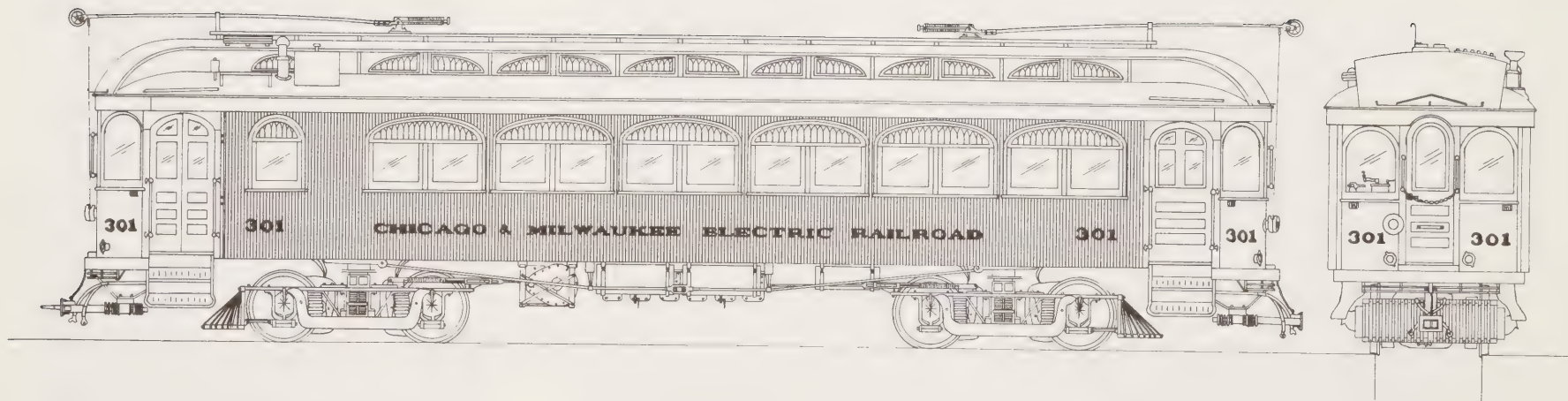
When new, the 300-class coaches were used along with the 200-series combines and the 400-type parlor-buffet cars in crack Milwaukee Limiteds. With the advent of steel cars, the 300's were gradually used less on through trains and more on the suburban Shore Line service. Though not as dressy, this application still gave the equipment quite a severe workout. By the mid-1930's, normal assignment of the 300-302 and their sister wooden cars was on school trippers, extra moves, and an occasional local train. From 1936 to 1939 they served as sleet cutters to keep the trolley wire clear during winter storms.

At this point it was proposed that the Central Electric Railfans' Association preserve one of the cars and eventually restore it to good shape. The project received enthusiastic support from the railroad, which retained title to the car (300 was chosen) but allowed CERA its exclusive use. In return, CERA maintained the safe condition and attractive appearance of the unit.

During the early 1940's the car served as a gathering place for members and was operated once a year as a CERA special train. During and after World War II it became impossible to continue the project, however, and the 300 was reluctantly retired in 1947.

Plan below antedates vestibule narrowing of cars in the 300 series. Note width over vestibule corner posts--about the same as over body corner posts--resulting in a car with overhang too great to negotiate Chicago "L" curves safely.

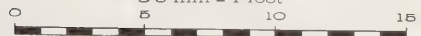




Drawing: LF

Scale in feet

35 mm = 1 foot



Coaches 300-302



CERA Official Car 300 retained North Shore Line's orange-and-maroon colors, although lettering and hardware were altered somewhat. (GK)

Before adoption of the car by CERA, the interior had fallen into disrepair. A complete restoration was effected, making the car a pleasant meeting room or fantrip vehicle.



The 300 and several similar units were placed for photography during a CERA inspection trip in June 1938. Note sleet-cutting blades attached to trolley shoes. (WBC)





Interior of #305. Unlike their contemporaries in the 100 series, the 300-class cars were designed without partitioning into smoking and non-smoking compartments. (GK)

COACHES 303-305

These three cars supplemented the 300-302 in Milwaukee Limited trains at the beginning of their career and, like the other wooden units, eventually came to serve in Chicago-Waukegan suburban operations and in Shore Line Route

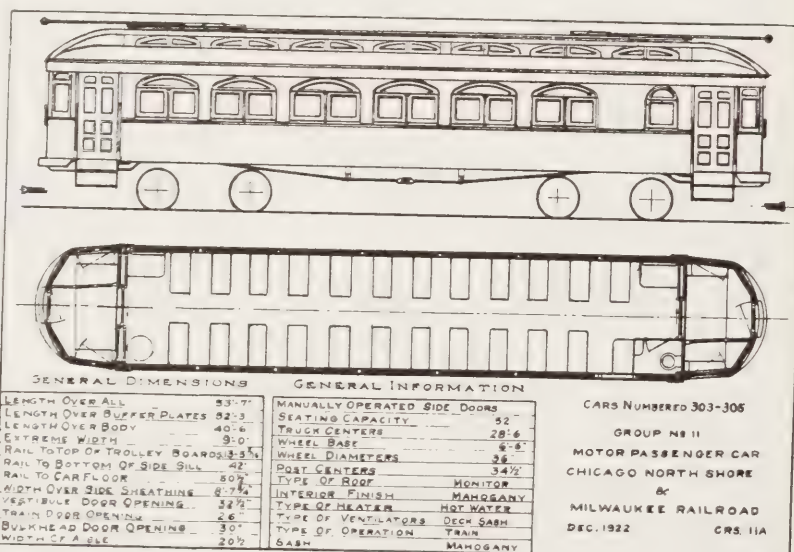
Drawing (at right) indicates outline of car after narrowing of the vestibules was effected.

Coaches 303-305

Still on shop trucks at the builder's plant, #305 (below) shows the original treatment of the vestibule design. (GK)

local service.

Application of these particular cars to miscellaneous chores after they were no longer needed to fill passenger-car requirements involved their use as sleet cutters for a few years before they were scrapped in 1940.





The interior of car 400 (at right) provided a spacious dining area and yet could be quickly rearranged as a chair car. (GK)

PARLOR-BUFFET CARS 400-402

The Chicago & Milwaukee Electric management in 1909 apparently felt that operation of limited trains demanded introduction of dining car service. Three cars of the 400 type were the initial result.

Classified as parlor-buffet or "cafe" cars, the 400-series units included facilities for serving meals. There was space for a maximum of seven tables. Removable tables were used so that the interior space could be utilized as a chair car if desired and, in fact, a portion of the car was normally kept set up as a parlor compartment.

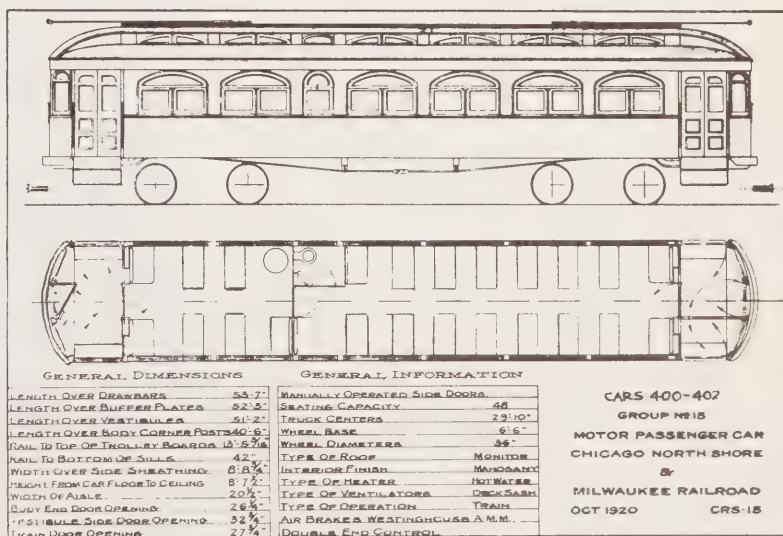
An alcohol-fueled range was used for cooking. Kitchen equipment also included a small refrigerator, and we are assured by the contemporary trade press that "the furnishings . . . are of the highest order in every particular and enable passengers to partake of a first class meal in entire comfort during the run between the two terminals."

Similarly arranged steel cars were obtained in 1917. Shortly thereafter, the 400-402 were converted for use as coaches. This change required removal of the kitchen and installation of walkover seats.

No longer needed in any service on North Shore Line by 1936, #400 was retired while the 401 and 402 went to the Chicago Aurora & Elgin Railroad on lease. For use by that line, they were renumbered 142 and 143 to avoid conflict with the CA&E's own cars numbered in the 400 series. During the brief period after World War II when these two cars were returned to North Shore Line, they continued to carry CA&E colors and numbers. Like the other leased cars, they were finally sold to CA&E in 1946.

Cars 400-402

A rebuilding in 1917 gave cars in the 400 class walkover seats for use as coaches (below).

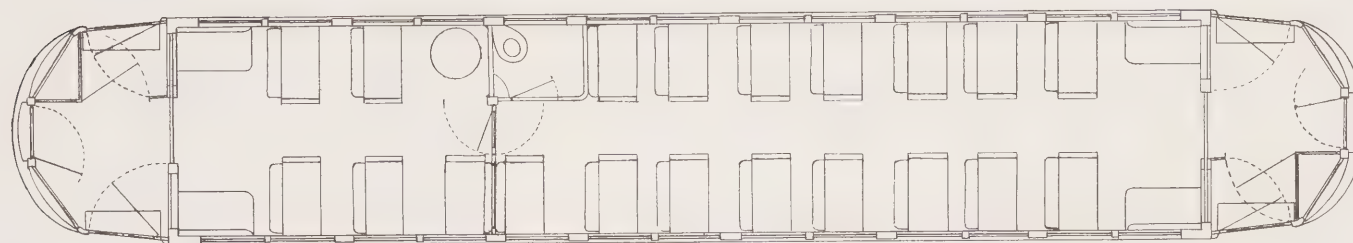
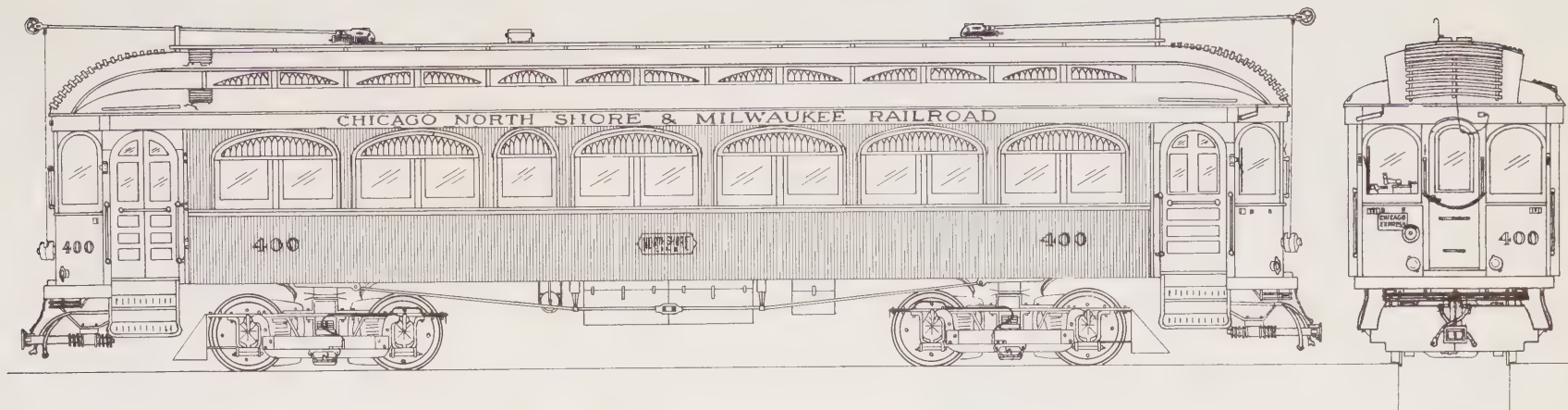




Car 400 took some layover time on the freight house siding at Elm Place, Highland Park. Note reshaping of vestibules, with corner post set a few inches inward from side of car. (GK)

Painting some of the interior woodwork as well as removal of the kitchen made the interiors of 400-series cars seem more roomy as coaches than they had as dining cars, despite the great increase in seating capacity. (RVM)

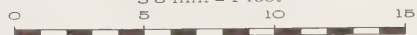




Drawing: LF, RGB

Scale in feet

3.5 mm = 1 foot



Coaches 400-402

On a southbound run at schooltime one morning, #400 stopped at Indian Hill station and the motorman descended to permit a quick "Use all the doors!" unloading of New Trier High School students. (GVC)

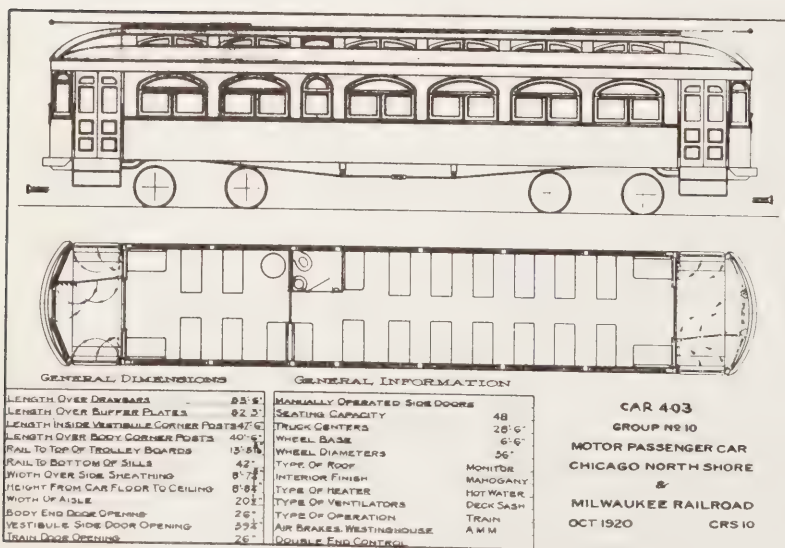


Car 403

PARLOR-BUFFET CAR 403

Purchased in 1910 to supplement original parlor-buffet cars 400-402, this car shared their design characteristics and service history. Conversion to coach came in 1918.

Sent to the Chicago Aurora & Elgin Railroad in 1936 as the twelfth of the North Shore Line wooden cars on lease, it was renumbered 144. Its use in CA&E's suburban commuter service ended in 1953.



The layout of car 403 is shown shortly after its rebuilding from parlor-buffet car to coach. (For photo, see Page 49.)

COACHES 150-164

North Shore Line's first fifteen steel cars, numbered 150-164 and delivered in 1915, were products of the J. G. Brill Company. Shipment of the cars was made on their own wheels via the Baltimore & Ohio, Erie, and Chicago & North Western railroads.

The electrical equipment was installed by the railway after delivery. Cars 153 and 155 were pressed briefly into service as trailers pending the completion of this job.

Westinghouse type HLF multiple-unit control systems were used on these cars and on all subsequent steel passenger units, making up a pool of equipment eventually attaining its maximum size of 145 cars, each of which could be used in a train with any of the others. This permitted North Shore Line to enjoy unusual freedom and flexibility in making up trains.

An innovation was use of M. C. B. couplers in place of the Van Dorn number 11 coupling device which had been used on earlier passenger cars. Height was 27 inches from railhead to center line of coupler knuckle—much higher than the Van Dorns were mounted, but still a few inches lower than couplers on steam-railroad cars.

An interesting styling feature which has disappeared over the years was the paired treatment of upper sash windows.

A tapered vestibule minimized overhang on sharp curves and thus permitted operation over Chicago "L" tracks. Third-rail shoes were fitted to the cars even before trackage rights were obtained.

The vestibule trap doors were fitted with a mechanism for sliding them a few inches out to the side. This would minimize any gap which might have occurred between the vestibule floor and high-level station platforms on the Chicago elevated lines. Actually the gap amounted to only a few inches and the slide mechanisms were not normally used.

The shaping of car ends, with anticlimber and coupler projecting far beyond the vestibule, was responsible for an odd accident in which one car participated in the early days. An Elgin Joliet & Eastern switch engine was moving slowly over that railway's intersection with the North Shore Line in North Chicago. An oncoming train of steel cars pulled up too close to the crossing and collided with the locomotive—in such a way that the driving rod of the engine descended on top of the projecting front coupler of the passenger car! This had the surprising effect of neatly flipping the steam locomotive onto its side, where it lay blocking the North Shore main line.

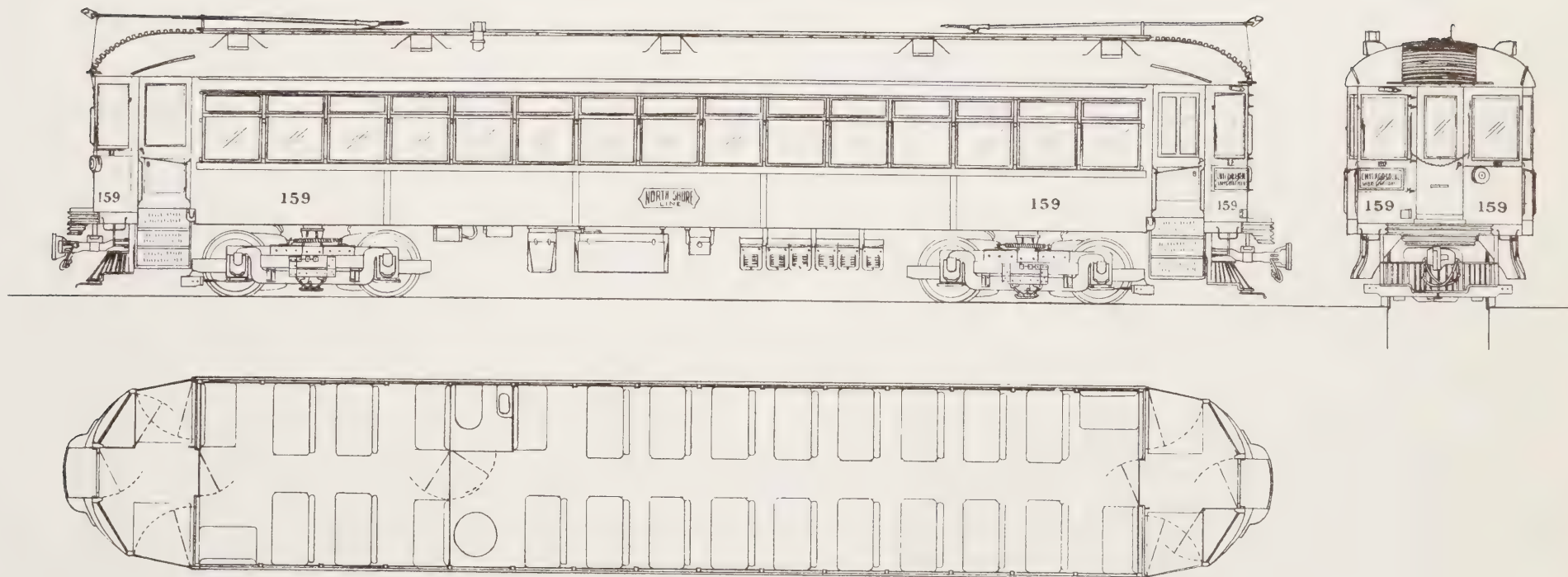
Circulating hot-water heat was installed on the 150-type cars as it had been on the standard wooden passenger cars. Over the years, this has been replaced in cars 159, 160, and 164 by electric heaters.

The bulk of the series has remained in service throughout the years since delivery. As newer units became available, the 150's were gradually removed from limited service. For years most of them operated on the Shore Line Route. Since its abandonment, Chicago-Mundelein and Chicago-Waukegan trains have been the normal operating assignment.

Coaches 150-164

Brand-new car 150. These steel cars carried the old Chicago & Milwaukee Electric Railroad name for only about two years before the Insull interests reorganized the railway and introduced the "North Shore" name. (GK)

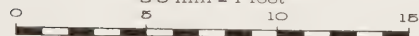




Drawing: RGB

Scale in feet

35 mm = 1 foot



Coaches 150-164



The Insull management had many photographs, like the one above, made for publicity purposes in the years around 1920. The 150-series cars frequently appeared, for they were then among the newest of the line's equipment. (GK)



A Brill builders' view of the interior of car 150. Note large pane of glass in door to smoking compartment. All window posts were carried through the upper sash on the interior; pairing of windows was a style feature seen only from the outside. (P)

150-class coaches were still frequently assigned to limited train service throughout the 1920's. Note dining car and parlor-observation unit (at right). (GK)



Various suburban and local services were a more usual assignment by 1947 (at left). #154 is seen on the Kenosha siding after a local trip terminating there. (GK)

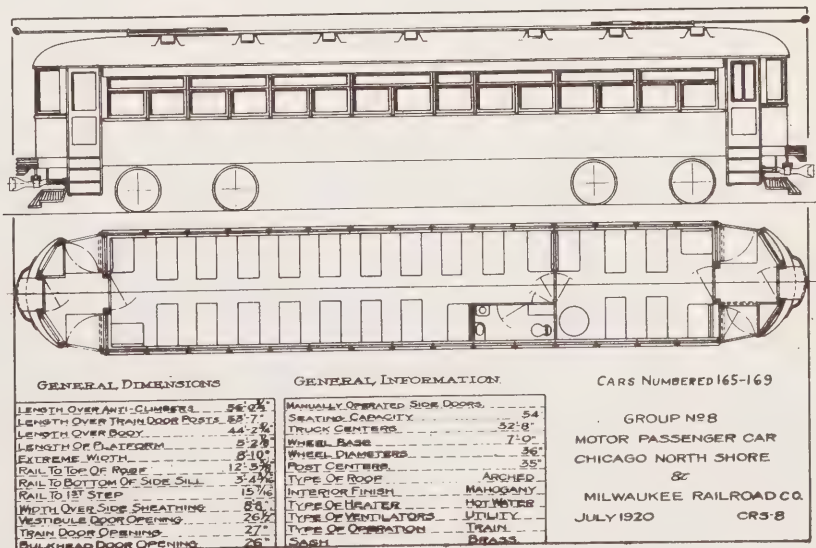


Jewett-built car 169 operated as a CERA special of 1953 and paused on the Mundelein branch at Green House (at right). An unusual experiment at this particular time was a stream-lined patch of red paint on each end of the otherwise gray roof. (GK)

Coaches 165-169

Only two years after construction of the first steel cars, fifteen more units were ordered. Of these, however, only five were coaches; the order of 1917 also included combines 250-256 and parlor-dining cars 404-406.

Although the coaches were built to essentially the same design as the earlier steel units, one can find minor variations in styling of exterior details. The principal interior change was enlargement of the lavatory enclosure, with consequent reduction in seating from 56 to 54. The cars retained hot water heat, except for #165 and #167, which were changed to electric heat.



The Jewetts were quite similar in dimensions and appearance to other early steel cars. Compare, for example, to the drawing of the Brill-built units on Page 122.



The 170-class cars, built by Cincinnati Car Company, closely resemble their predecessors. Detail collectors will note a few minor variations, as around the destination sign and the anticlimbers. (GK)

Coaches 170-197

COACHES 170-197

Cincinnati Car Company products began to serve North Shore Line passengers with the introduction of twenty-eight steel cars in 1920. Initially, numbers 170-182 were motor cars, while the remainder of the series filled the line's need for steel trailers. Trailers 183 and 184 were motorized in their first few years.

Trailers have full control facilities at each

end and can thus appear at any position in a train without loss of operating convenience. At first, they carried trolley poles and third-rail shoes.

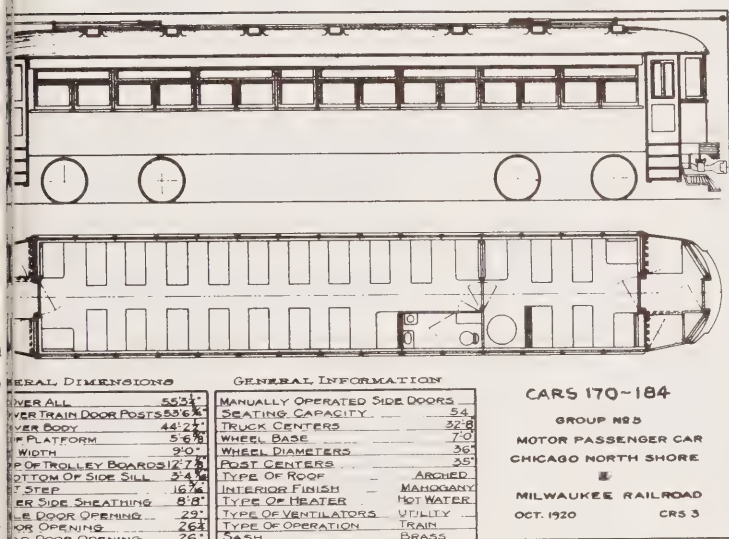
Hotwater heat and green plush walkover seats are interior features that have remained standard on the Cincinnatis. Eight cars--numbers 174, 177-179, and 181-184--have, however, been equipped with electric heat in place of the hot-water system.

Although a trailer, #197 carried trolley poles when new. Photo at right shows the car body raised a few inches above normal height to permit coupling to freight cars for delivery over the steam railroads. Third-rail devices were attached at Highwood.





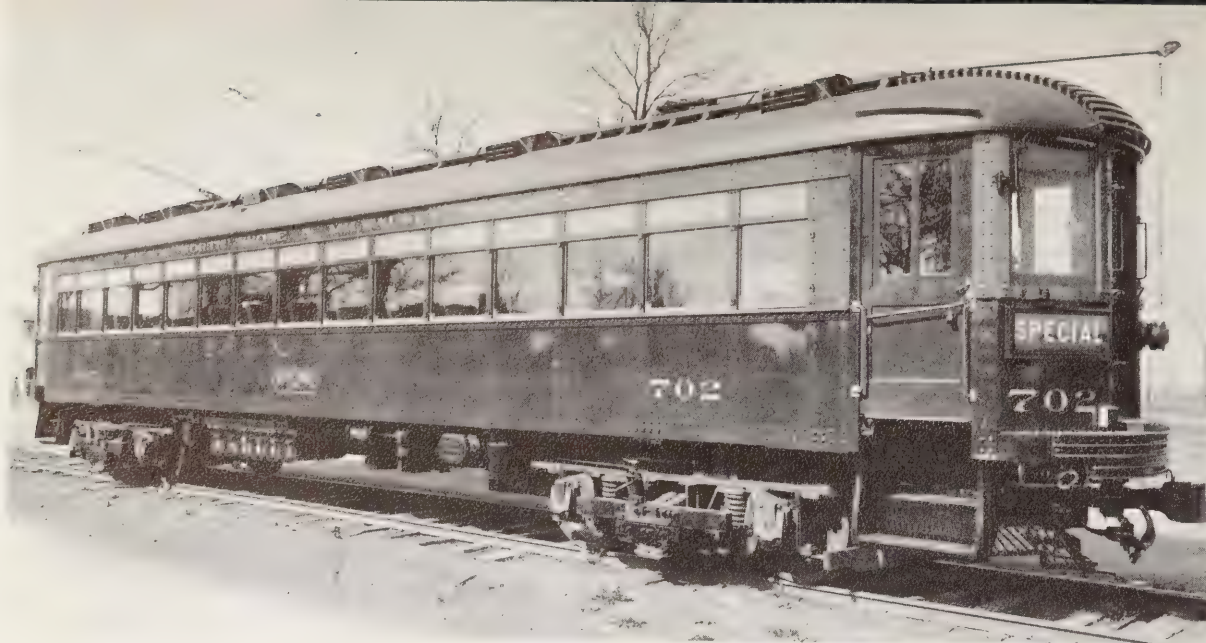
Car 177, still carrying the orange-and-maroon colors introduced in the late 1920's, took a layover at the Shore Line Route terminal in Waukegan (above) in 1941. (JJB)



Although the drawing at left covers specifically the motor cars of the 170-184 series, the bodies of trailers 185-197 followed the same design.

A 1940 view of trailer #187 shows restyling of upper window sash and removal of current collecting devices, for which bus jumpers had been substituted. (JJB)



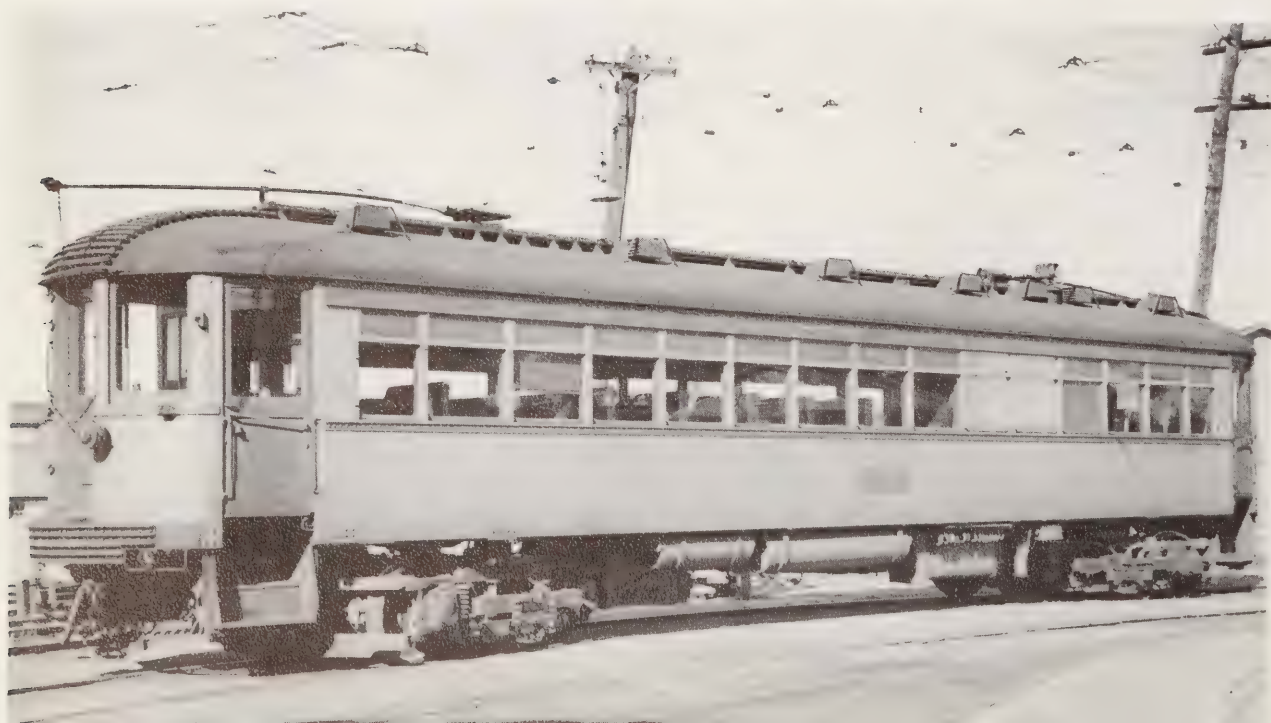


The newer Cincinnati, like #702 (above), were originally built with individual upper window sash. Note also the changed construction of body corner posts. (GK)



The 1926 order of cars, under construction at the Cincinnati Car Company plant. (ET)

Car 724 at Highwood. (GK)



Coaches 700-733

Car 726, as rebuilt for limited train service, leads a Milwaukee trip around the curve at North Chicago Junction. (GK) At center of page is the layout of this car, and at bottom is a drawing covering the "Shore Line modernized" units in the series (see next page).



One might expect from the number series that the 700-class coaches would show a marked change in design from the earlier steel cars. But the principal reason for starting a new series of car numbers was that almost all of the numbers in the 100 series had been used.

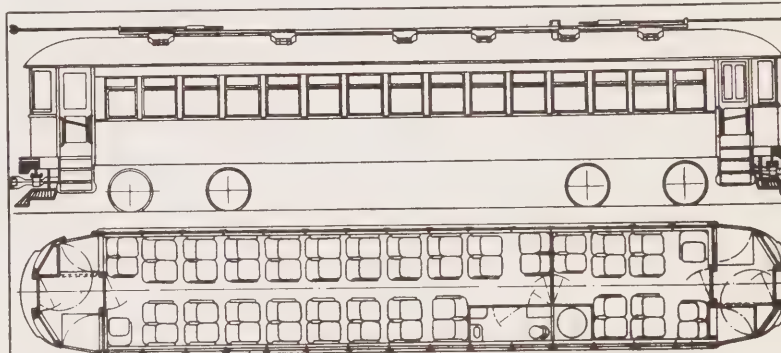
Actually the cars in the 700-733 group represented three orders spread over the years 1923 through 1926. There was, however, little variation between the sets of cars and they are consequently treated together here. Beginning in 1928, steel cars of a somewhat different style did appear; these will be detailed in Bulletin 107.

The side windows of the 700's were somewhat redesigned from the styling of the earlier steel cars. The upper sash windows no longer featured the pairing which had characterized the first of the steel cars. The 700's also used a more massive body corner post and had a correspondingly smaller side window adjacent to each vestibule.

Two independent heating systems were used. During cool weather in spring and fall, a new system of thermostatically controlled electric heaters was customarily operated. In colder weather, more conventional hot-water heating was brought into operation, while both systems could be operated simultaneously to cope with the most severe conditions. More recently, however, all cars have been equipped with all-electric heat.

Cars 720, 726, and 730 were damaged in a grade-crossing collision and were repaired with more luxurious interior fittings than the other cars of the series. Entirely new, rotating bucket seats were installed. Diaphragms at train doors eased movement of passengers between cars of a train. These three cars were then assigned primarily to Skokie Valley Route limited trains.

Most of the other 700's were given the so-called "Shore Line modernization" treatment. This included new seat covers on the old walkover seats, lowering of the ceiling, and new ventilating and lighting systems. All-electric heat was used in the modernized cars. Interior decorating involved a new floor covering and an attractive painted finish with stainless-steel trim and chrome-plated hardware. Exteriors received new green, gray, and red colors at this time. Thus the cars were given a more up-to-date appearance. Normal assignment thereafter was to Shore Line Route express-train service. Since abandonment of the Shore Line, they have been used mainly in suburban service between Chicago, Waukegan, and Mundelein.



GENERAL DIMENSIONS

GENERAL INFORMATION

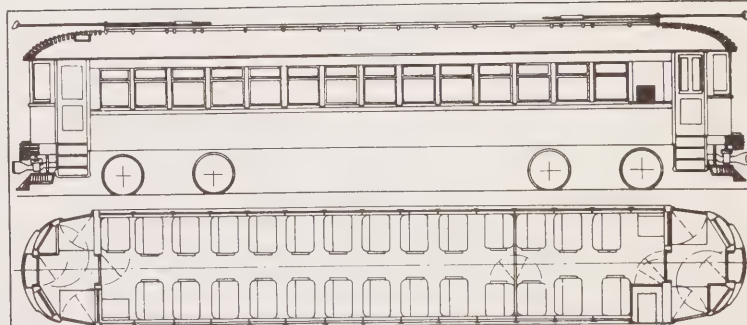
LENGTH OVER ANTI-CLIMBERS	55'-3 1/2"	WEIGHT	102000 LB.
LENGTH OVER TRAIN DOOR POSTS	53'-7"	SEATING CAPACITY	52
LENGTH OVER BODY	44'-2 1/2"	TRUCK CENTERS	32'-8"
LENGTH OF PLATFORM	5'-6 1/2"	WHEEL BASE	7'-0"
EXTREME WIDTH	9'-0"	WHEEL DIAMETERS	36"
RAIL TO TOP OF TROLLEY BOARDS	12'-7 1/2"	POST CENTERS	35"
RAIL TO BOTTOM OF SIDE SILL	3'-4 1/2"	TYPE OF ROOF	ARCHED
RAIL TO 1ST STEP	16 1/2"	INTERIOR FINISH	MAHOGANY
WIDTH OVER SIDE SHEATHING	8'-7 1/2"	TYPE OF HEATER	HOT WATER & GASOLINE
VESTIBULE DOOR OPENING	29"	TYPE OF VENTILATORS	UTILITY
TRAIN DOOR OPENING	26"	SASH	BRASS
BULKHEAD DOOR OPENING	26"	CAR BUILDER	CINCINNATI CAR CO.

CARS NO 720, 726 & 730

GROUP NO 30-A

MOTOR PASSENGER CAR

CHICAGO NORTH SHORE
&
MILWAUKEE RAILROAD CO.



GENERAL DIMENSIONS

GENERAL INFORMATION

LENGTH OVER ANTI-CLIMBERS	55'-3 1/2"	MANUALLY OPERATED SIDE DOORS	
LENGTH OVER TRAIN DOOR POSTS	53'-7"	SEATING CAPACITY	52
LENGTH OVER BODY	44'-2 1/2"	TRUCK CENTERS	32'-8"
LENGTH OF PLATFORM	5'-6 1/2"	WHEEL BASE	7'-0"
EXTREME WIDTH	9'-0"	WHEEL DIAMETERS	36"
RAIL TO TOP OF TROLLEY BOARDS	12'-7 1/2"	POST CENTERS	35"
RAIL TO BOTTOM OF SIDE SILL	3'-4 1/2"	TYPE OF ROOF	ARCHED
RAIL TO 1ST STEP	16 1/2"	INTERIOR FINISH	PAINTED
WIDTH OVER SIDE SHEATHING	8'-7 1/2"	TYPE OF HEATER	ELECTRIC
VESTIBULE DOOR OPENING	29"	VENTILATION	FORCED
TRAIN DOOR OPENING	26"	WEIGHT	102,300
BULKHEAD DOOR OPENING	26"	SASH	BRASS

CARS NUMBERED 714 - 719,
721 - 725, 727 - 729, 731 - 733

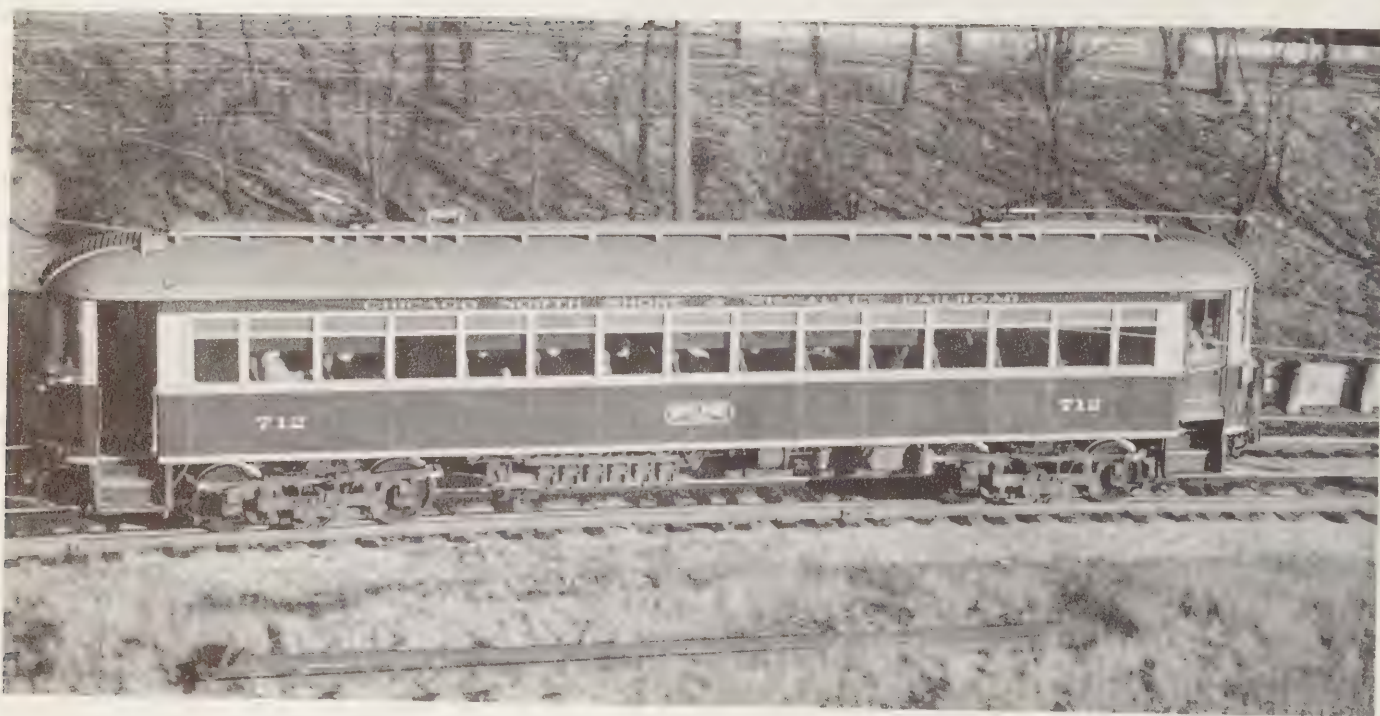
GROUP NO 30.

MOTOR PASSENGER CAR

CHICAGO NORTH SHORE
&
MILWAUKEE RAILROAD CO.
1926 CRS-30.

Car 715 (opposite page) had been in service less than three months at time of the picture. (GK)

Interior of car 721 as built.
(CEK)



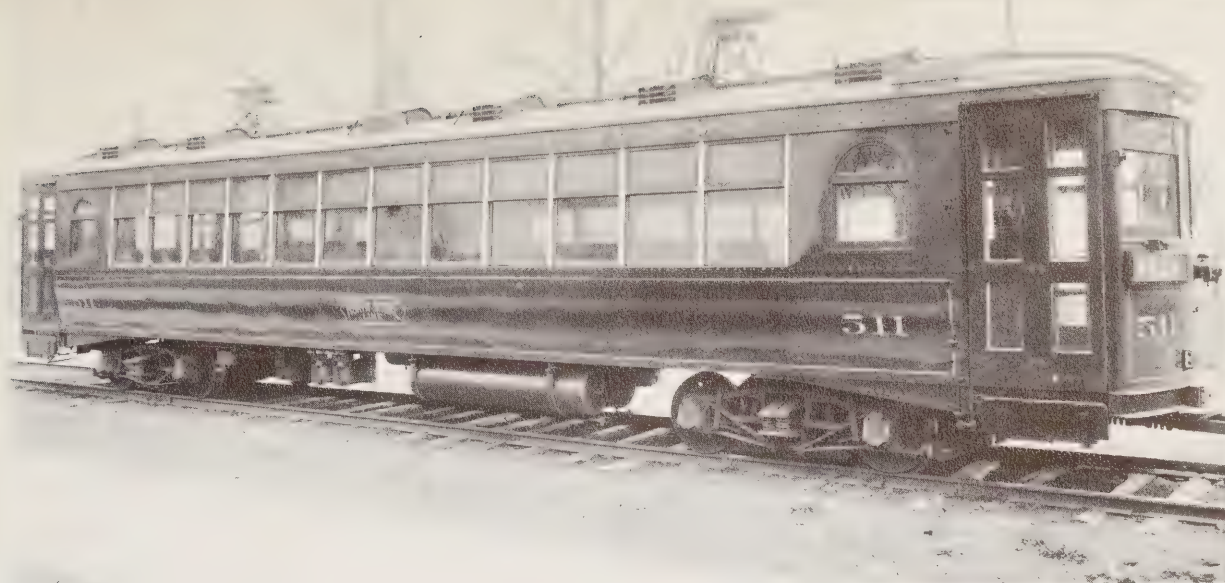
The forced-air ventilation installed as a part of "Shore Line modernization" permitted streamlining the car roofs somewhat by removal of the old ventilators. #712 is shown leaving North Chicago Junction on a southbound trip. (GK)

Interior of modernized car
713. (GK)





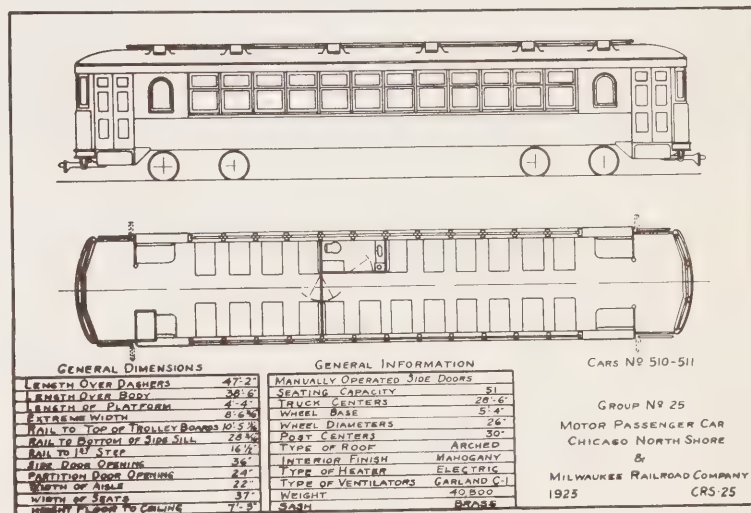




Coaches 510 and 511

Lightweight cars 510 and 511 represent the only application of the famous Cincinnati curved-side car style to North Shore Line and, indeed, one of its few uses in the northern Midwest area, however popular it may have been elsewhere. When these cars were obtained in 1922, the Lake Bluff-Mundelein branch which they were to serve was operated independently from North Shore's main line. Therefore, a completely different car style was not objectionable, and lightweight cars were certainly welcome on this branch with its low passenger totals and minimal power supply.

After 1926, however, through trains of standard multiple-unit heavyweight equipment operated between Mundelein and Chicago over the new Skokie Valley Route. Mixing light and heavy cars presented problems and, as surplus heavy cars became available they replaced 510 and 511 on the Lake Bluff-Mundelein shuttle.



Although the lightweight cars were substantially shorter than North Shore's standard cars, there was space for 51 seats.

Car 510 (at left) on its usual service assignment, about to leave Mundelein for Lake Bluff. (GK)



Combination car 251 at Highwood office in the early 1940's. Bars inside the three front windows indicate the extent of the baggage compartment. Color scheme at the time was green with gray and red trim, topped off by a light gray roof. (GK)

Combines 250-256

Straight baggage car 255 shows the open interior, without partition, seats, or toilet compartment. (GK)





COMBINES 250-256

North Shore Line's only steel passenger-baggage cars were delivered in 1917 and have since been used in all classes of service. Interior arrangements have proven extremely flexible, with varying amounts of baggage space being allotted over the years.

Initial arrangement confined the baggage compartment to the portion of the car without windows. While this was sufficient in the early years or on the Shore Line Route with its emphasis on suburban passenger service, it proved inadequate for several-times-daily baggage-carrying trains between Chicago and Milwaukee. Consequently the baggage room on some cars was lengthened by two or three window spacings and the lavatory was moved back an equal amount. Some arrangements involved removing the lavatory altogether and placing longitudinal seats in the baggage compartment for overflow passenger loads.

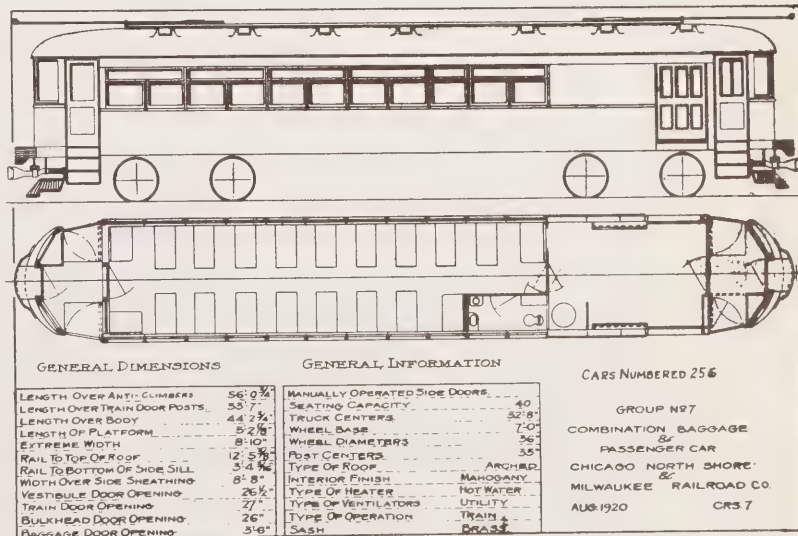
Minor changes effected on all cars over the years include installation of a diaphragm on the coach end and substitution of all-electric heat for the original hot-water heating systems.

The baggage partition and all passenger seats were removed from car 255, then reinstalled during World War II and again removed after the end of hostilities. As a straight baggage car, it is assigned primarily to an occasional trip on which a large amount of sailors' baggage to or from Great Lakes is anticipated.

Car 251 was given a "Silverliner" restyling in 1953. This involved extensive interior improvements and a new exterior color scheme of silver and red with gray striping.

The right-hand side of #253. Although most North Shore Line cars present a more nearly symmetrical appearance than these coach-baggage units, all have a "front," or #1, end assigned, generally the end of the car adjacent to the smoking compartment. (GK)

Floor plan of car 256 as originally arranged shows the assignment of more interior space to passengers and a correspondingly smaller baggage compartment.





Several of the named Limited trains carried parlor-dining cars. Here we see #405 signed up for the "Badger Limited." (GK)

Diners 404-

PARLOR-DINING CARS 404-406

As part of the second order for steel cars, North Shore Line received three parlor-dining cars carrying road numbers 404 to 406. These were similar in layout to wooden units 400-403, which they replaced. Initially two of the new cars were assigned to the three-times-daily "Gold Coast Limited," with the third car acting as a spare or operating on chartered trains.

Some early experiments in use of mobile radio-telephone were carried out with car 404 during the winter of 1922. Apparatus installed for a while

permitted receiving the broadcasts of commercial radio stations and transmitting of conversations from the car. The successful transmitting distance, however, was only 15 miles.

By 1926 sufficient newer dining cars were available and the 404-406 saw conversion to use as coaches. Cincinnati Car Company did the rebuilding work and outshopped the cars with new numbers 734-736.

All three cars received the "Shore Line modernization" treatment in 1940 and have continued to operate, principally in suburban service, since that time.

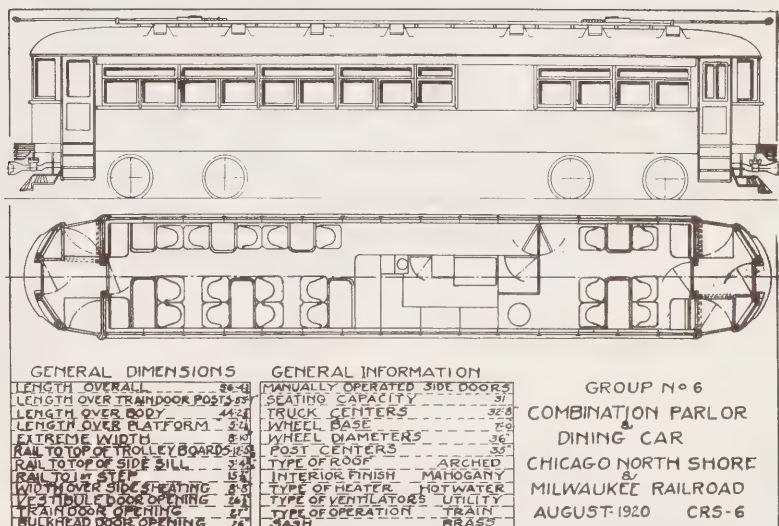




406

Cars 404-406 attained greater seating capacity than their wooden forerunners by using two-and-one seating in the dining compartment. Interior, car 406. (GK)

Dining car layout. For use as chair cars, the 404-406 were readily convertible by removing the tables and rearranging seats.

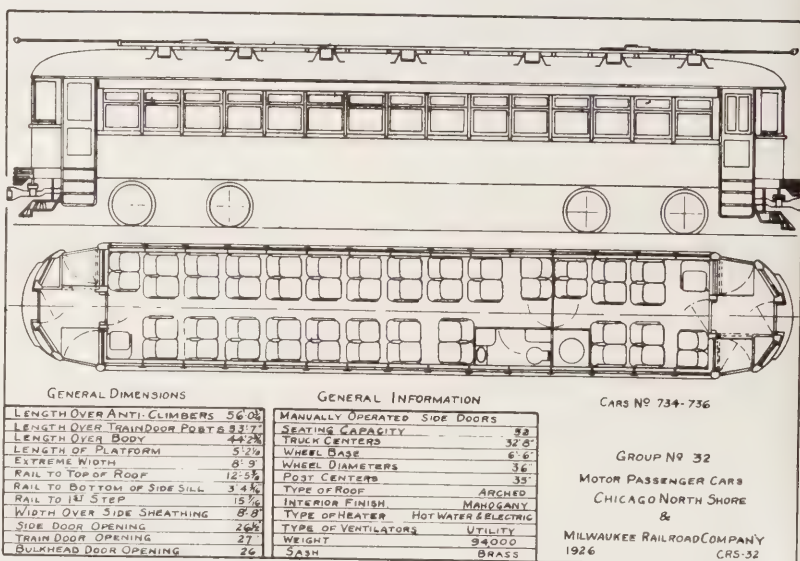


Former diner #405, newly outshopped coach 735 appears in Cincinnati photo with car-body blocked up to railroad car height for shipment. This was probably the first of the orange-and-maroon cars, though the colors were differently placed than on cars painted later. (GK)



Coach 736 in the Highwood yard. (GK)

Interior arrangement of coaches 734-736 was quite similar to that of other 700-class cars which had not yet undergone the modernization job.



Car 734 after modernization (below). Note elimination of one side window at the #1 end of the car to form an equipment compartment. (JJB)



Diners 407 and 408

PARLOR-DINING CARS 407 AND 408

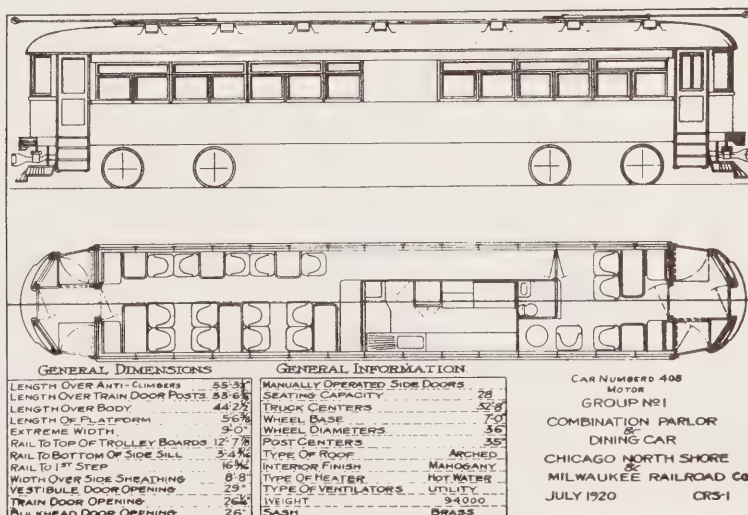
One trailer diner, #407, and one motor, #408, were included in 1920 orders. Like their predecessors, these had parlor compartments and removable tables for use as straight parlor cars

when desired. Receipt of newer equipment and the traffic decline of the early 1930's caused the 407 and 408 to become surplus. After spending half of their life in dead storage at Highwood, they were scrapped in 1940.



Unfortunately parlor-dining cars 407 and 408 were in service for such a short period that few photos of them in operating condition exist. View above was made at Highwood, where #408 was sandwiched between other spare cars in the 1930's.

Apparently a larger kitchen than on older cars was desired when the 407 and 408 (at right) were ordered, for space was increased by one-third.





Car 409 was a favorite unit for use on early CERA inspection trips. Photo above shows it in a color scheme that was current about 1940. (GK)

Dining Car 409



A more capacious interior was featured by the 409 than by earlier dining cars since none of the space was used for a separate parlor compartment. (GK)



The 409 served as a dining car throughout the 1930's. Newer units were, however, available for scheduled trips and many of car 409's assignments were to special moves. View above was taken on Highwood shop lead.

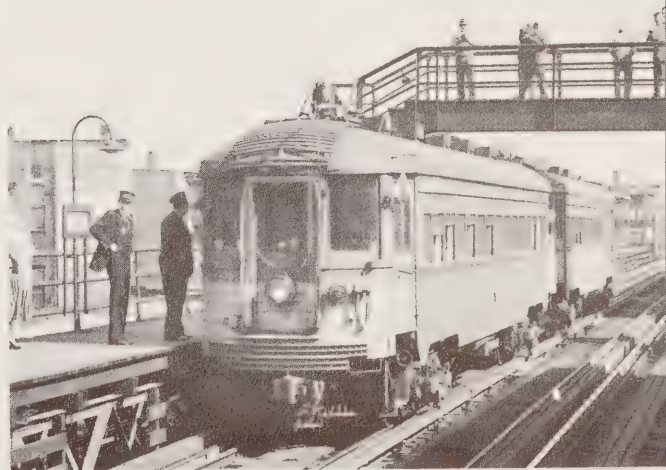
The car was converted to a high-capacity coach in 1942. After the war, another rehabilitation made it a "Silverliner" unit. This last stage is shown (below) on a CERA special train of May 15, 1960, with similarly reconditioned #251 in the rear. Scene is 61st Street station on the South Side elevated.

DINING CAR 409

First of North Shore Line's straight dining cars, not designed for alternate use as a parlor unit, was #409. The kitchen was placed at one end of the car to permit a larger dining room, rather than near the center to separate parlor and dining areas as in the older cars.

Unlike many interurban dining cars, this car was equipped with a full four-motor installation.

Under pressure of moving wartime passenger traffic in 1942, North Shore Line equipped the car with coach seats to produce a unit equivalent in capacity and arrangement to a 700-series coach. Another change, accomplished in 1955, made the 409 a "Silverliner." As such, it received an improved interior appearance and was painted in the imitation-stainless-steel and red exterior colors. Like other Silverliners, it has since operated almost exclusively in mainline Chicago-Waukegan-Milwaukee service.





Cars 410-413

PARLOR-OBSERVATION CARS 410-413

The four parlor cars with open rear observation platforms, obtained in 1923 and 1924, signalled North Shore Line's determination to provide even better service than the steam railroads of the day. The electric line's observation cars, after all, were free from the locomotive smoke which was sometimes an annoyance to passengers on other railroads.

The observation platform provided space for several riders despite the necessity of fitting it into a space equivalent to the vestibule area of other cars. Trap doors, loading steps, and a gate for access to any car which might be coupled on were concealed on and under the platform. A pilot and a receptacle for a headlight were also provided at the open end of the car, although the control cab existed only at the vestibuled end.

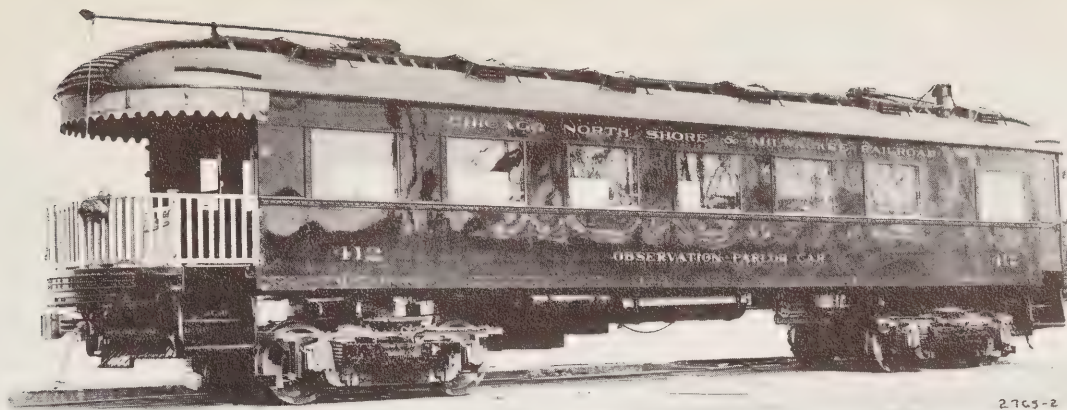
Unfortunately, traffic could not support operation of full parlor cars in the depression economy after 1932. Stored until World War II, cars 410-413 were converted into large-capacity coaches for suburban passenger traffic. Standard double-end control cabs and two-motor equipment (obtained by stripping some merchandise dispatch cars) were installed. Today the cars operate principally in rush-hour commuter runs between Chicago and Mundelein.

Kenosha passenger station (opposite page) was brand-new when the parlor-observation cars came to the property and proved to be a splendid place to observe the most luxurious of electric railroad operations. (GK)

Car 410 (above and left) provided first-class transportation in a day when the brass-railed observation platform was the symbol of unsurpassable elegance. (GK)







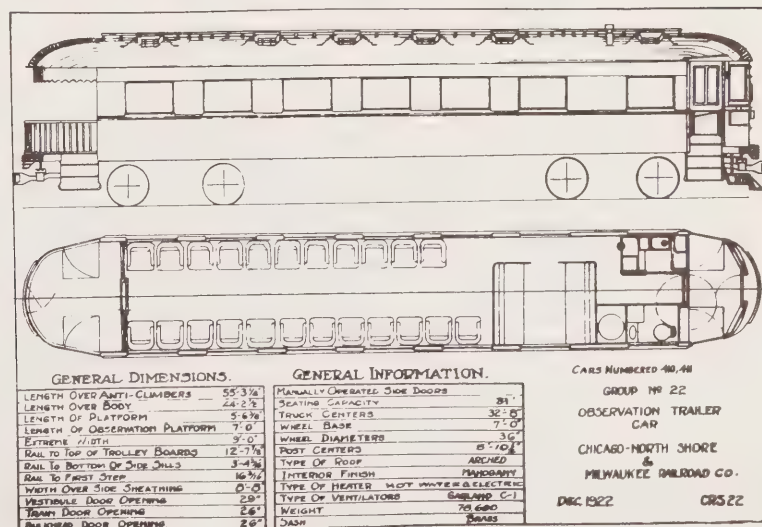
2765-2



Two parlor cars soon proved to be insufficient, and #412 (above) made up part of a repeat order. (WDR)

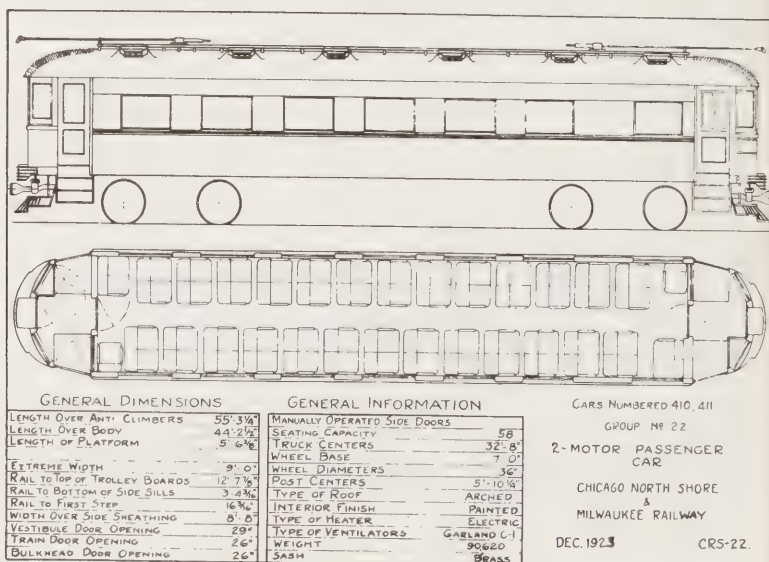
North Shore Line achieved inviting interiors by such touches as occasional variations in the style of chairs. (GK)

Although not equipped for serving meals, the parlor cars included a small kitchen for preparing light refreshments (at right).





Former observation end (above) was enclosed and equipped with a standard control cab in 1942. Removal of all partitions except the bulkheads at each end of the car permitted installation of 58 seats (at right).



Coach 410 (at left) alongside the main line at Highwood. End of car away from camera was formerly the observation end. (GK)

Motored dining car #414 (at right) was acquired in 1924, along with two of the parlor-obs units. (GK)



Cars 414-417

DINING CARS 414-417

Motor car 414, built in 1924, and trailers 415-417, constructed two years later, made up a set of similar dining cars. Some unusual variations were made, however, to fit the railway's needs in the early 1940's.

Cars 415 and 417 were selected in 1940 for rearrangement as "tavern-lounge" cars. In addition to a modernization treatment similar to that for coaches, these cars received a "J"-shaped lounge area in place of some of the tables. Decorations included boy-and-girl motif murals on the plated-over upper window sash and a set of dishes cleverly painted on the center partition. New golden curtains, cushioned parcel racks, and a deep carpet completed the luxurious effect. Regular service assignment was on Chicago-Milwaukee trains at breakfast, lunch, and dinner hours six days a week.

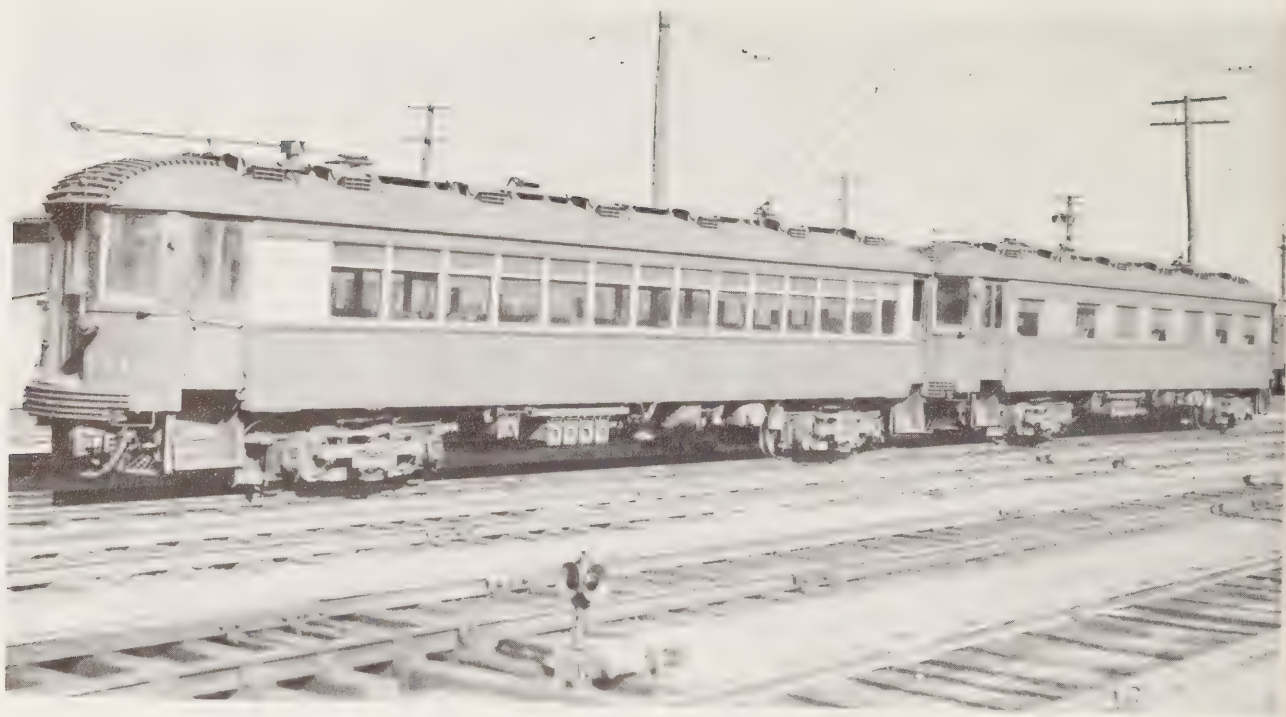
Dining service except on the five daily round trips serviced by the streamlined Electroliner

trains was withdrawn in 1949. Car 417 was placed in storage, but the 415 was again overhauled and emerged as one of the first "Silverliner" cars. Since that time it has been on standby duty, used with several Silverliner coaches whenever one of the Electroliners has been out of service.

Diners 414 and 416, not made into tavern-lounge units, followed a different course. Like several other surplus dining and parlor cars, these were given coach interiors in 1942. Unusual low-back walkover seats installed had been purchased from the Chicago Rapid Transit Company, which had used them in a pair of experimentally modernized—but never used—"L" cars. Various motor and trailer applications were tried out on the 414 and 416, with each car ultimately powered by two of the motors originally obtained from #414. Shore Line Route suburban service was the usual assignment, with the New Trier High School trippers being a particularly common application of these cars.

1926-model diner #416 carried trolley poles and third-rail shoes when new, although the 415-417 were trailers.





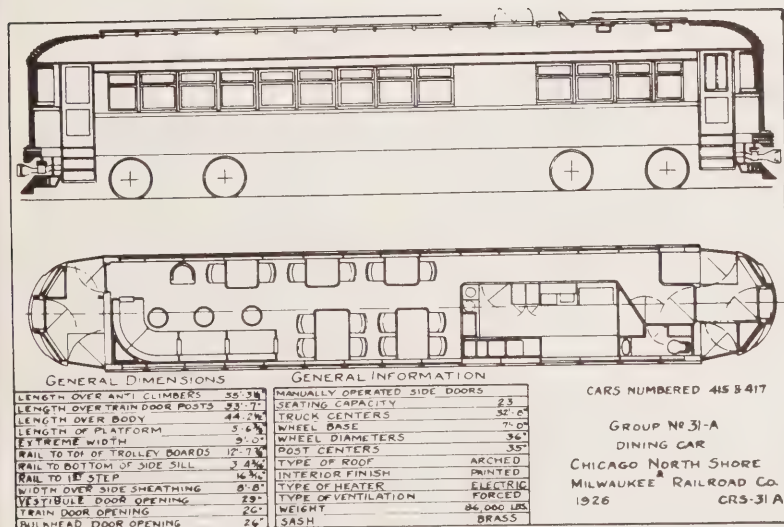


Cars 414 and 416 were converted to coaches in 1942 to help handle wartime passenger traffic. Seats were obtained by purchase from the Chicago Rapid Transit Company, which had experimentally installed some new ones in its cars 1797 and (at left) 1798. (GK)

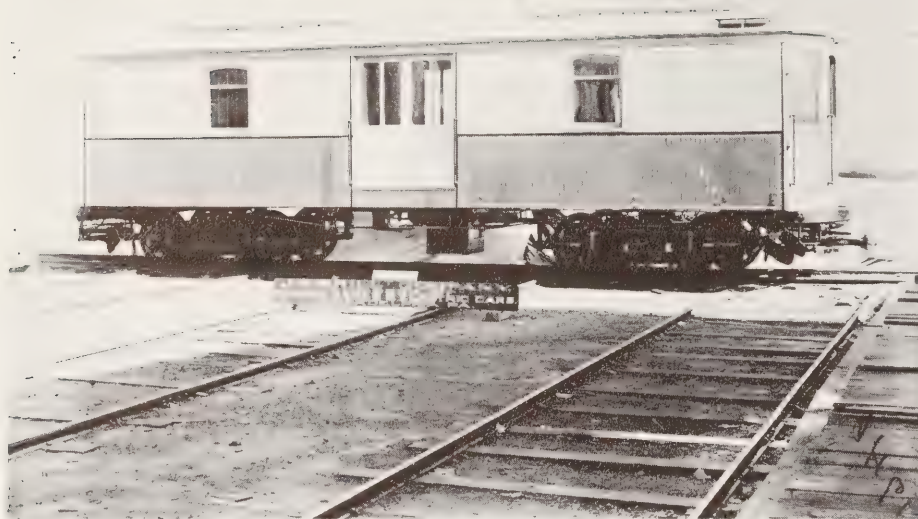
The same set of seats appears in single-compartment coach 414 (below, GK). Exterior appearance in 1946 is shown at the top of the opposite page, with #414 coupled to the 412, which had been similarly converted into a coach. (JJB)



The 415 (at left) and 417 were made into tavern-lounge cars by removal of some of the dining tables and installation in their place of a "J"-shaped lounge section.



Conversion of two cars into tavern-lounge units involved rearrangement of one end of the car, including moving the bulkhead door to an unusual off-center position.



Built by Brill in 1902, and thus a sibling of coach-baggage units 11 and 12, was straight baggage car #1. (P)

Early Express Cars

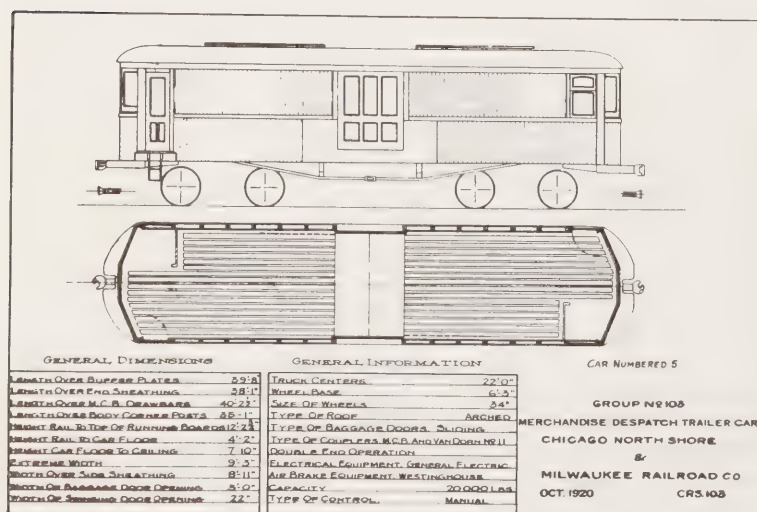
EXPRESS CARS 1, 5, AND 6

Most interurban lines of the early 1900's used a few express motors in addition to their combination passenger-baggage cars for hauling small freight shipments, and Chicago & Milwaukee Electric Railroad was no exception. Three units of varying sizes came from the J. G. Brill works in 1902.

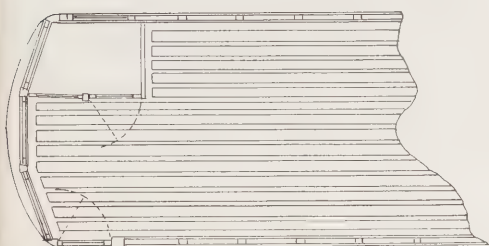
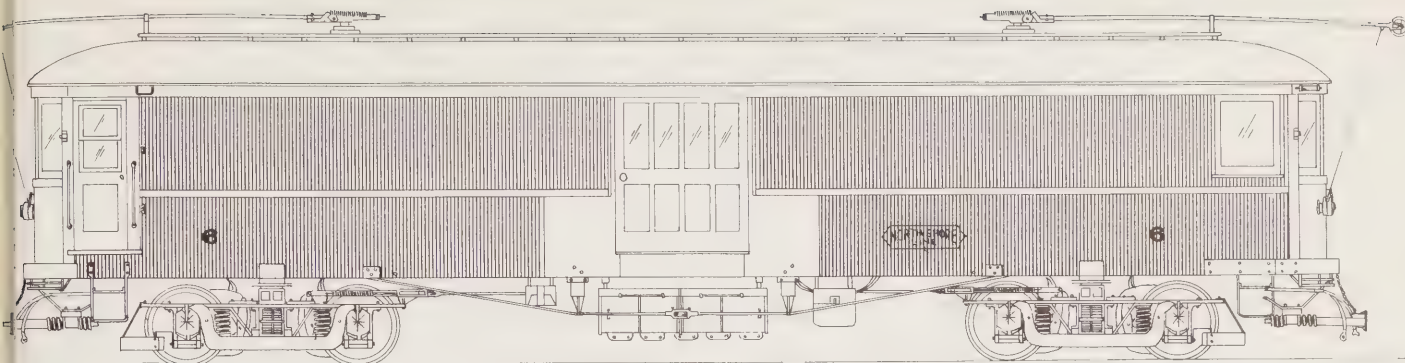
An unusual characteristic of these cars was the end door, placed not in the center panel of the car end but to one side.

The largest car, number 6, eventually had floor level raised and end doors removed. Equipped with multiple-unit control, it resembled newer baggage cars closely enough to remain in service until the 1930's.

Other early express cars included several small combination baggage-passenger cars with interiors stripped for hauling express only. A car about which little is known was second #18, built as a straight express car after destruction of combine #18.



Another early express car is seen here in a later-day company diagram as merchandise dispatch trailer #5.

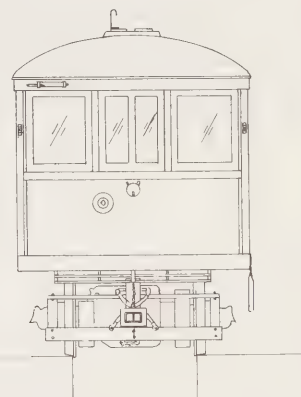


Drawing: LF

Scale in feet

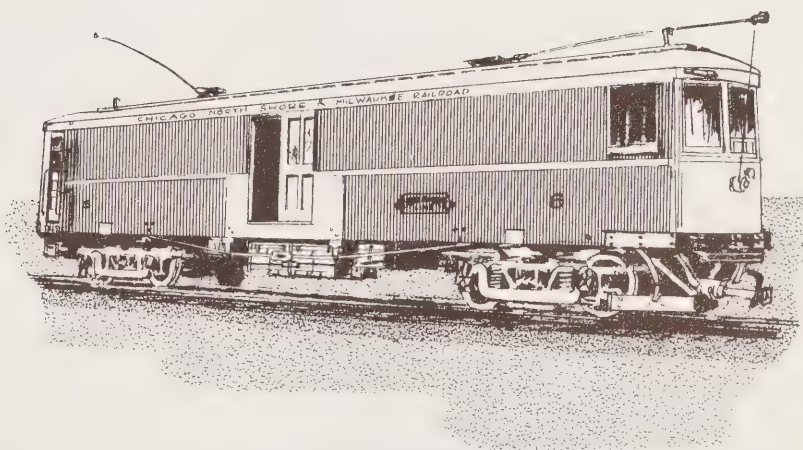
3.5 mm = 1 foot

0 5 10 15



Express Car 6

Express car 6 had a long and useful life in the merchandise dispatch service. By the 1930's it had seen rebuilding to a unit of the appearance shown on this page. (Sketch: GK)





Express Cars

Photographed about 1920 to indicate North Shore Line's readiness to handle large quantities of less-than-carload traffic, train of new merchandise dispatch cars headed by #211 suggests the multiple-unit operation which was frequent. Scene (above) was made on the lead to the Rapid Transit shops at Wilson Avenue, Chicago. (GK)



EXPRESS CARS 203-214

North Shore Line's express business was extensively developed under the name of merchandise dispatch by the Insull management after 1916. Greatly increased traffic required leasing two Chicago "L" coaches which had been made into baggage cars. A more permanent solution was purchase of twelve new merchandise dispatch cars in 1920. These "M. D. motors" had door arrangement similar to that of the leased cars but otherwise resembled North Shore Line's standard passenger cars. The same electrical systems were used, but the express car motors were geared lower and mounted only two per car.

Several of the 203-214 series were stripped of their motors and electrical equipment in 1942 to permit equipping some additional passenger cars with power. In a few cases the cars were placed in work service, but most of the set continued to handle merchandise dispatch trains until 1947, when that service was discontinued.

Painted in the orange and maroon colors (with black trim and lettering) of a later period, the 204 loads alongside the freight house next to Milwaukee passenger station. (GK)

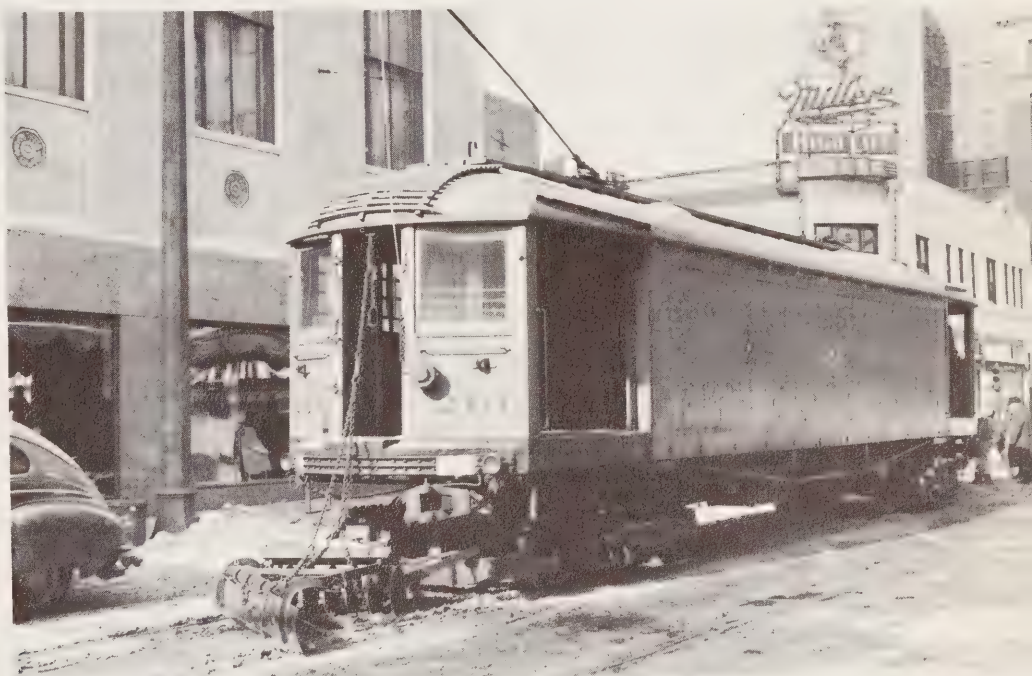


The billboard-sized sides of four end-door express cars were used in a public service advertising campaign of World War II days. Cars 209-212 received identical red, white, and blue partial paint jobs.

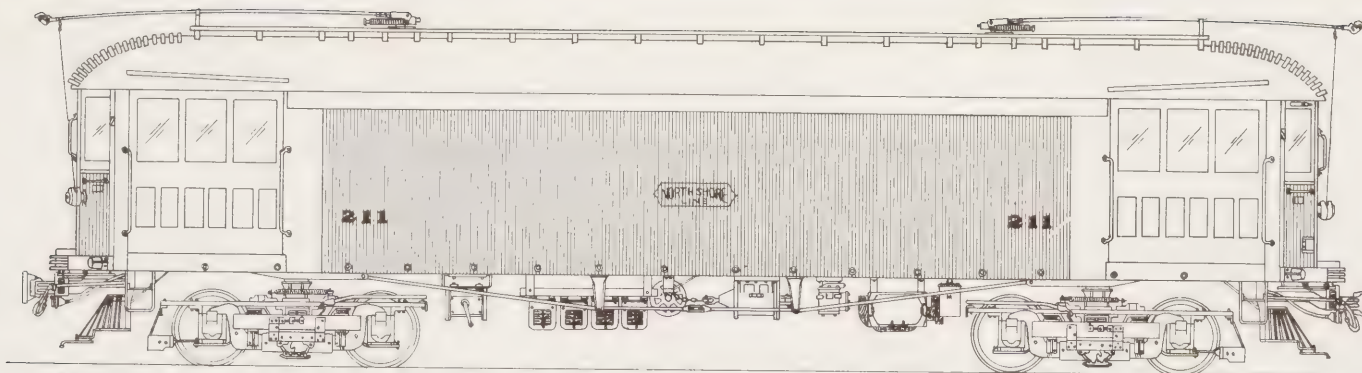
203-214

Ice-cutting car 213 was equipped with a disc harrow and scraper to eliminate formations of packed snow and ice between the rails.

Here it clears the Milwaukee city line at 5th & Wisconsin in February 1947. (GK)



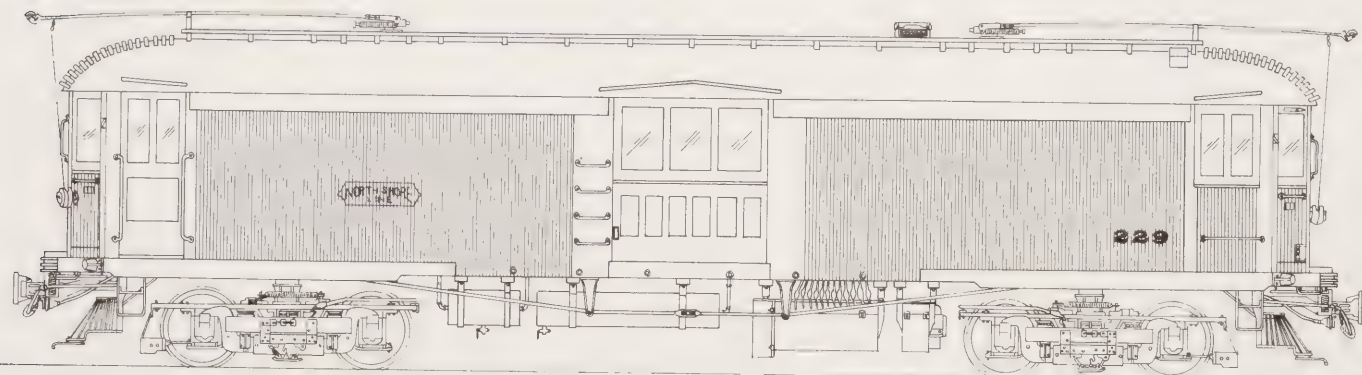
Trailer #203 appears shortly after motors and electrical equipment were removed for use on passenger cars. (JJB)



#1 End

LEFT SIDE of Cars 203-214
Underfloor equipment same on left side of all two-motor cars

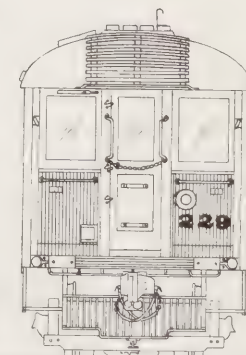
#2 End



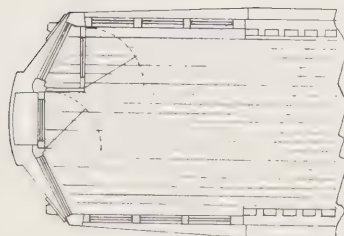
#2 End

RIGHT SIDE of Cars 215-239
(Shown with added reinforcing steel at each end of car)
Underfloor equipment same on right side of all two-motor cars

#1 End



END
Same for all cars

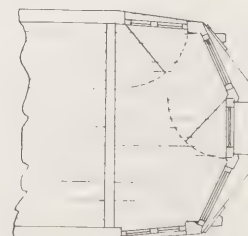
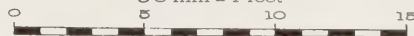


VESTIBULE PLAN
Cars 203-214

Drawing: LF

Scale in feet

35 mm = 1 foot



VESTIBULE PLAN
Cars 215-239

Express Cars 203-239

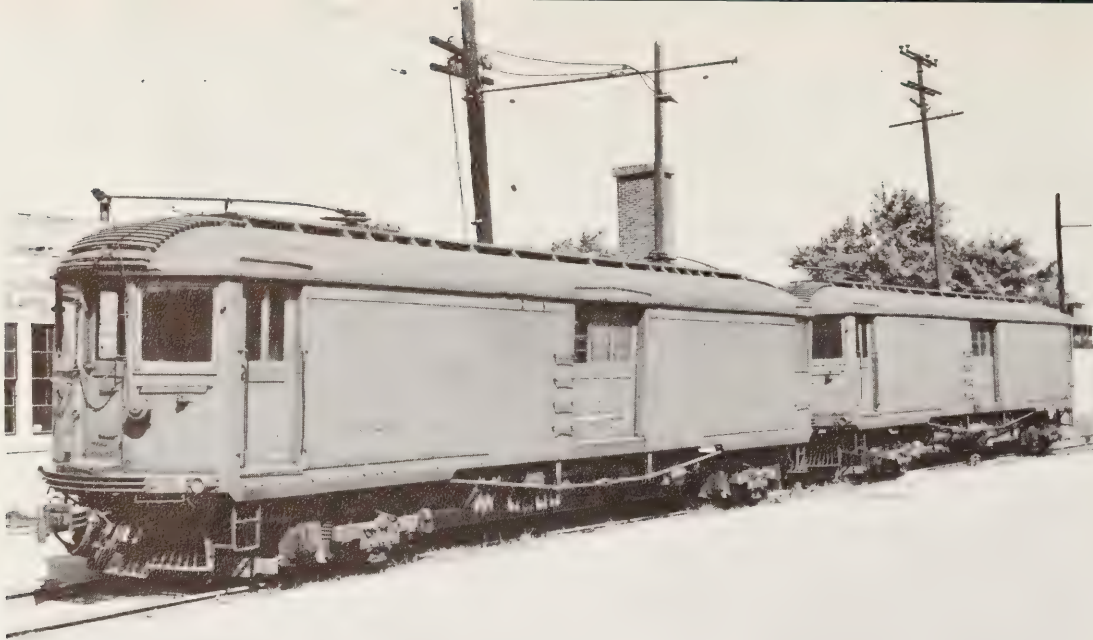


Four-car train composed alternately of end-door and the newer center-door "M. D." cars (above) affords an interesting comparison of the two body styles. (GK)

Express Cars 215-239

North Chicago freight house is the locality of a somewhat more recent study of #220 (below). Pettibone yard, classification center for carload freight, is just out of view to the right. (GK)





The center-doc cars in particular received their share of tough assignments over the years and required frame strengthening, seen (at left) above each truck of #221 and #226 at Kenosh

EXPRESS CARS 215-239

Experience with the 203-class express motors suggested that additional cars which were soon needed should be of similar dimensions and design, but with the freight doors located at the center of the car side instead of at each end. A total of 25 cars built to this modified pattern was ordered over the next several years. The ten cars of the final order were built with four-motor equipments. Over the years, however, motor equipment of these cars was extensively traded around to give each unit the right amount of power for its particular job.

Between 1927 and 1947 an important job of the merchandise dispatch motors was hauling trains of flat cars loaded with highway truck-trailers in the first big "piggyback" operation. Frame strains imposed by hauling such a heavy trailing load eventually required addition of some outside bracing to the cars.

Increases in freight traffic during World War II necessitated placing some of the M. D. motors in carload freight service as locomotives. Two

cars in multiple-unit usually proved adequate for hauling short freight trains. Other M. D. cars were pressed into service to augment the road's small fleet of cabooses.

After all less-than-carload work ceased in 1947, the better cars of the series were placed in service doing whatever utility chores they could be adapted to handle. Cars 229 and 232 served as yard switchers at Highwood and Harrison Street, Milwaukee, respectively. Others came to be used as tool cars for construction and repair gangs, replacing a varied collection of older units on this job.

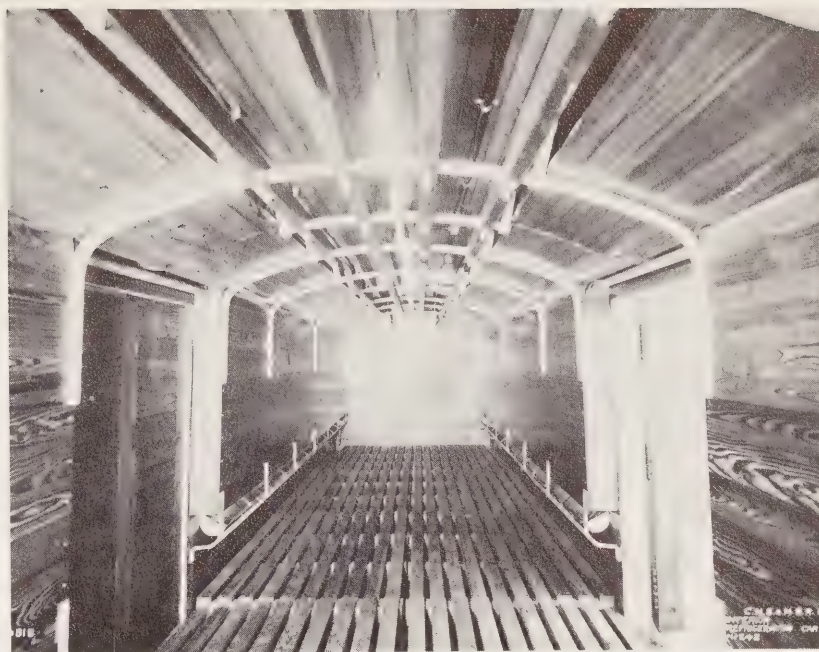
Cars 231 and 238 were equipped with truck-mounted snow plow blades to serve in storms with a light enough snowfall that the large Russell plow was not needed. This permitted final retirement of a small, antiquated single-end plow, the homemade #601.

Six other merchandise dispatch cars were assigned to sleet cutting service. Kept coupled in trains of three cars, these are sent out from the centrally located Pettibone freight yard when there is danger of trolley wire icing.



Since the end of merchandise dispatch operations in 1947, car 231 (at left) has served the railway as a neatly rebuilt snowplow. (GK)

Few electric railroads were as well equipped to haul perishables as North Shore Line. Compact design fitted the refrigerated space (at right), as well as a machinery room and two control cabs, into the 50-foot-long car size to which North Shore was restricted. (GK)



Refrigerator Cars 240-244

REFRIGERATED EXPRESS CARS 240-244

Improved handling of perishables in merchandise dispatch service was permitted by use of five refrigerated cars purchased in 1926. These cars were similar in external appearance to the standard express cars but were equipped with lighter unpowered trucks. Regular control cabs were provided, separated from the cargo compartment by solid bulkheads.

A machine room about eight feet in length was located adjacent to one vestibule. This contained a completely automatic, thermostatically-regulated ammonia refrigerating machine driven by a 600-volt DC motor. A tank and spray chamber for the water needed to cool the ammonia condenser were also provided.

The refrigerator compartment occupied the remainder of the car. This area was cooled by expansion of the ammonia in pipes located along

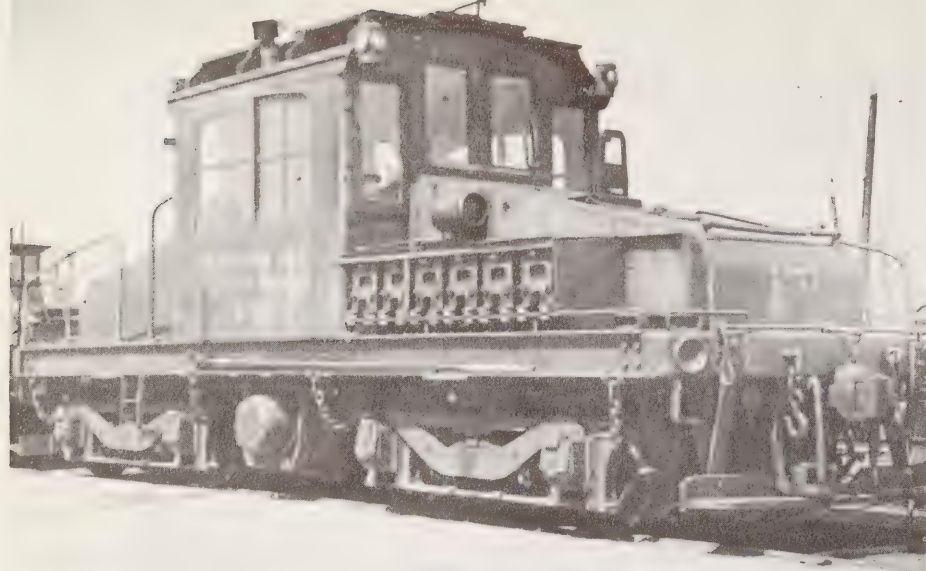
the side walls. Gas-proof lighting fixtures were used to guard against explosions. A slatted floor, standard in refrigerator cars, was used to permit air circulation beneath the cargo. Meat-hanging racks were arranged along the ceiling.

Normally operated in the regular overnight merchandise dispatch trains, these cars carried principally meat from Chicago to the consumer communities. Dairy products moving from Wisconsin points to Chicago assured a return load. Beer in kegs was frequently handled. In fact, car 244 was parked alongside the tracks at Waukegan for storage of beer after delivery there by train.

North Shore Line also owned for a time two refrigerator cars of the standard steam railroad type. Numbered 3021 and 3022, these had been used by the L. E. Myers Company to supply meat to construction camps while the new Skokie Valley Route was being built in 1925.

The entire set of multiple-unit refrigerator cars. Note use of a light style of trailer truck. (GK)

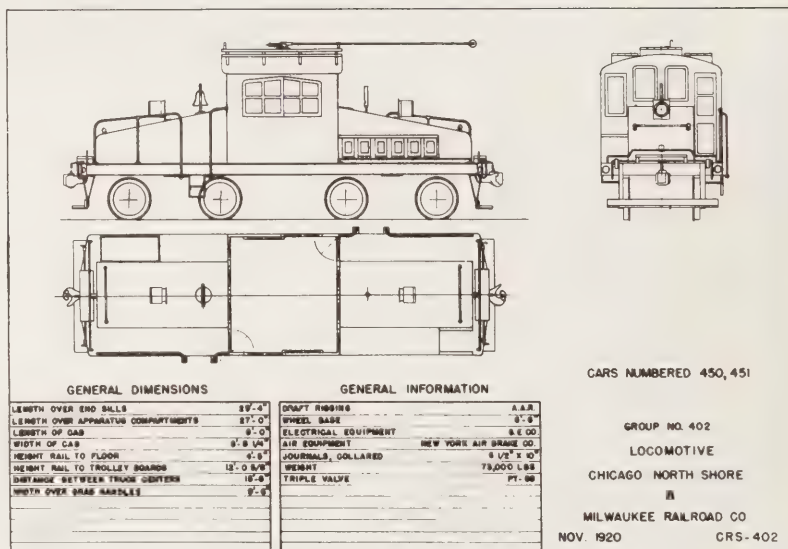




Although diminutive by the standards of today's freight locomotives on North Shore Line, the 450 and 451 (at left) handled their full quota of freight and work trains over the years from 1907 to 1948. (GK)

Locomotives 450 and 451

These locomotives were not unlike the light steeple-cabs built by General Electric Company for other small electrified railroads.



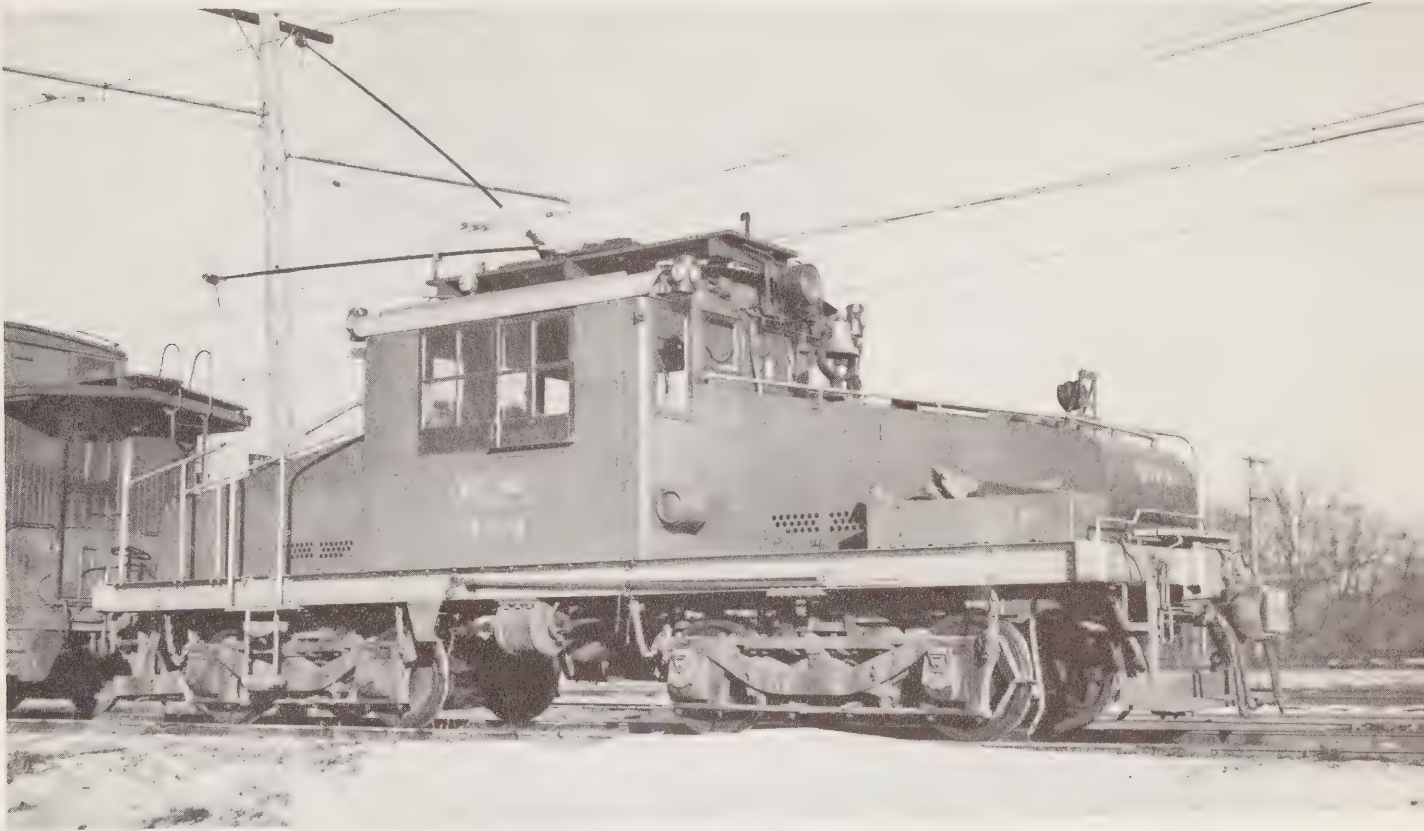
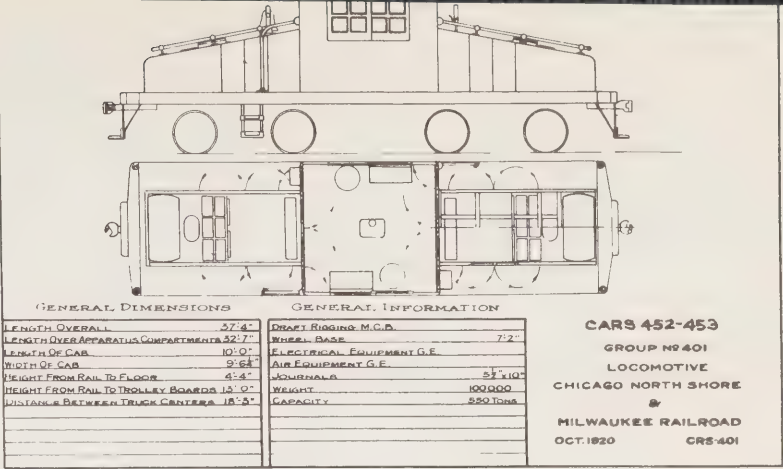
Installing concrete footings for catenary poles north of Waukegan was an odd job handled by the 450 in the 1920's. Final assignment of these locomotives was switching truck-trailer flatcars at each end of the line. (GK)

Locomotives 452-454

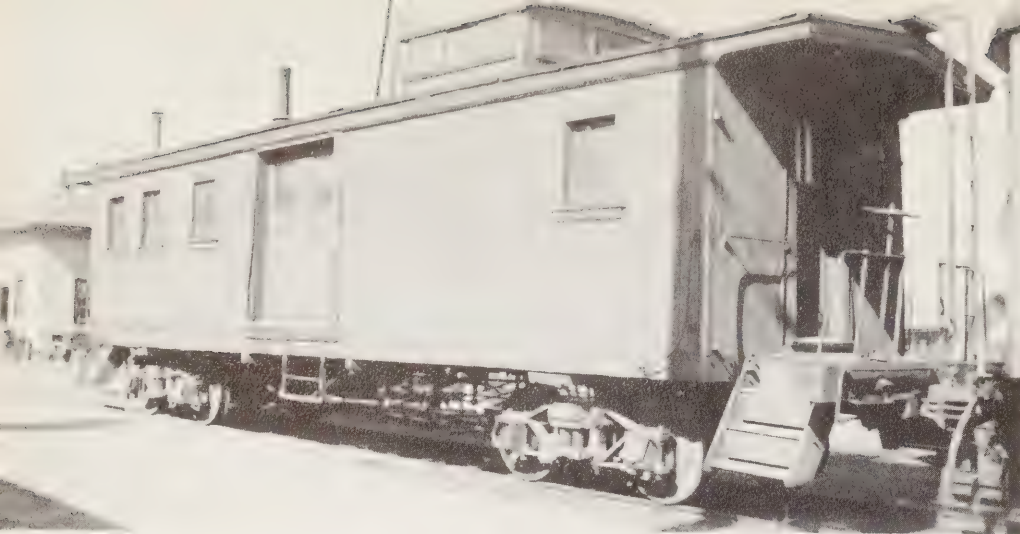
North Shore Line's medium-sized steeple-cabs were likewise obtained from General Electric-- #452 and #453 in 1918 and #454 in 1923--but they showed the GE styling less clearly.

Locomotive 454 (immediately below) handles a switching job at Pettibone. Easily reversible trolley poles permit using both poles simultaneously when handling a heavy train. (JJB)

The 452 (at bottom) is seen with side-dump ballast car on a work extra at Highwood in August, 1942. (JJB)



Freight



Side-door caboose 1000 (at left) in the Highwood yard during 1938. (EF) See drawing on the opposite page.

Flat cars of the 1400 series were obtained by the railway as it began to reach out into the rural areas. Unit at right is helping to install communication cables on the new Skokie Valley Route in 1926.



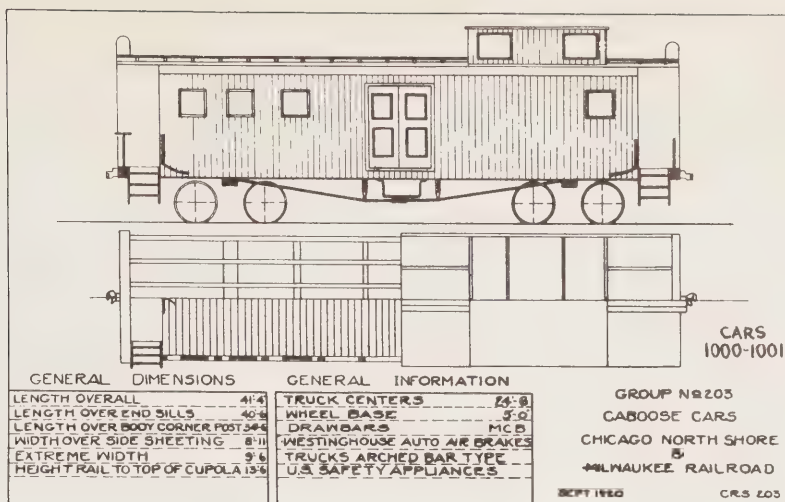
A small fleet of box cars was acquired and assigned numbers in the 3000 series. Most, however, were soon converted for use by construction gangs. The 3019 (at left) remains even today alongside the tracks at Pettibone yard. (JJB)

Most of the 5000's were steel gondolas built in the 1920's. The unique #5015 (at right) was made of concrete panels with metal reinforcing. This experimental car failed under the poundings it received in being emptied by clamshell buckets. (AMC)



Cars

Not new even when obtained by North Shore Line in 1917, the line's first two cabooses have since been replaced by more modern units.



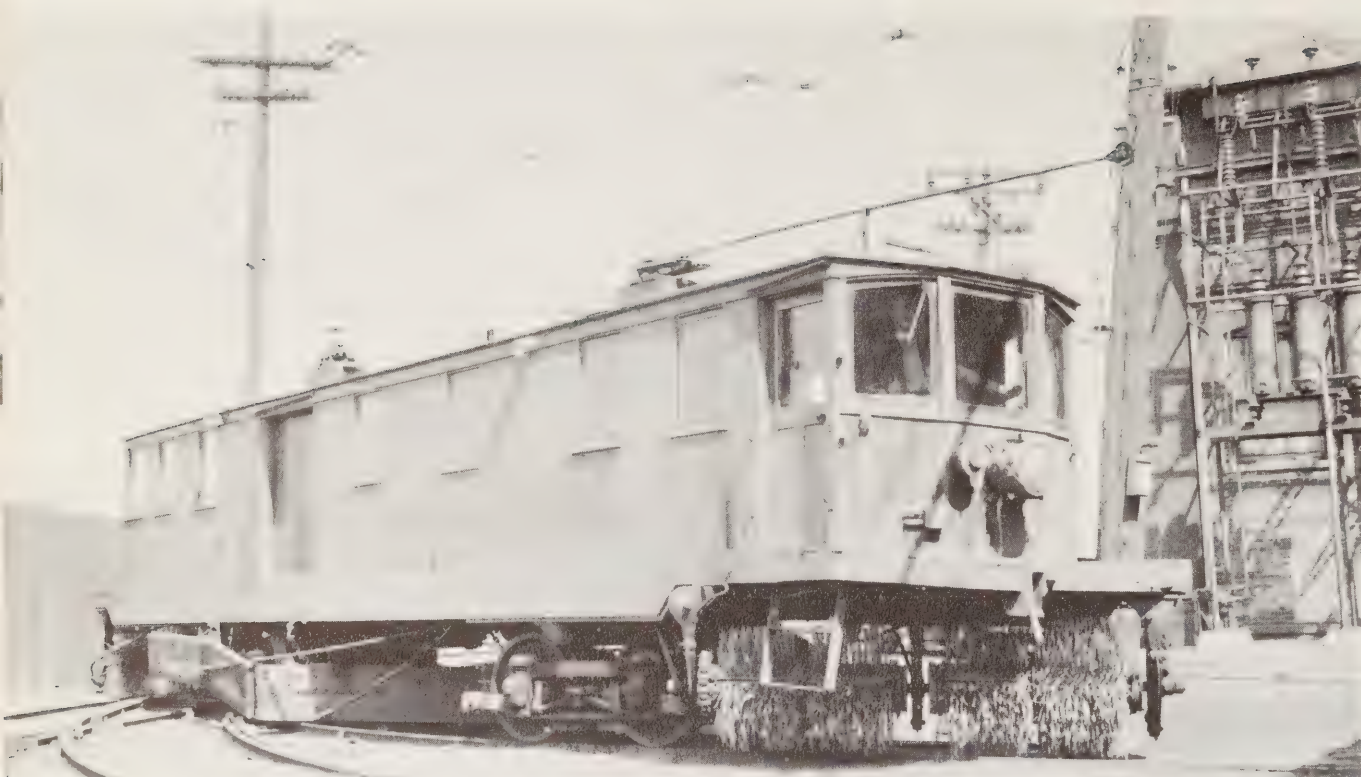
The sixty wooden gondola cars of the 2000 series, like #2053 (at left), served principally to haul quarry products on North Shore Line. Several were reconstructed for special uses.



A Lidgerwood ballast unloader was mounted on #2001 (above). (WDR)

Completely enclosed, #2056 served as thermit welding car (at right) after having been used as portable substation for a decade. (WDR)

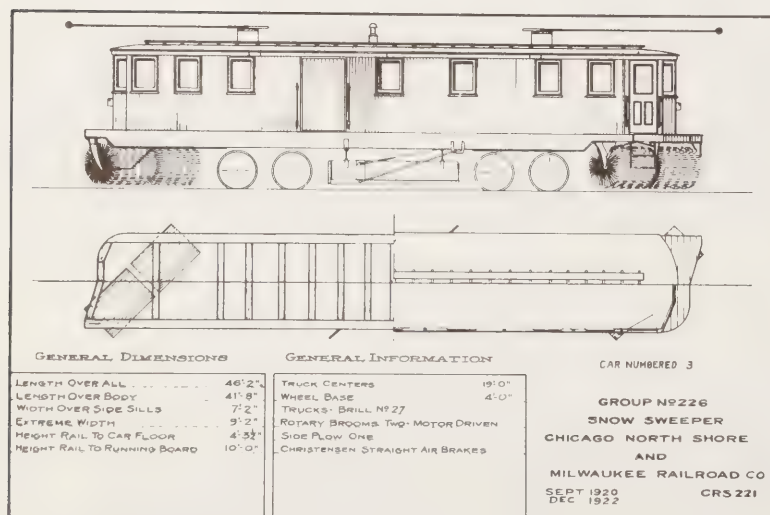


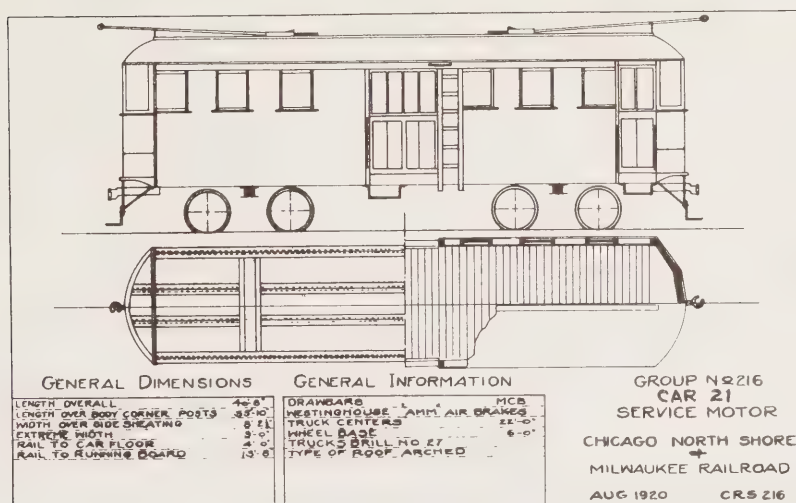


Massive snow sweeper #3 had a fifty-year career fighting the elements anywhere that North Shore Line tracks lay in paved streets. The large amounts of street running in Milwaukee, in Waukegan, and through the Shore Line communities necessitated maintenance of several such units by the railway. Even today, the body of #3 serves in the railway field as a storeroom and workshop for the Illinois Railway Museum.

Snow Equipment

Above: At the North Chicago car barn, May 4, 1941. (JJB)





Sweeper #21
(above) at the
Milwaukee car-
barn. (WDR)

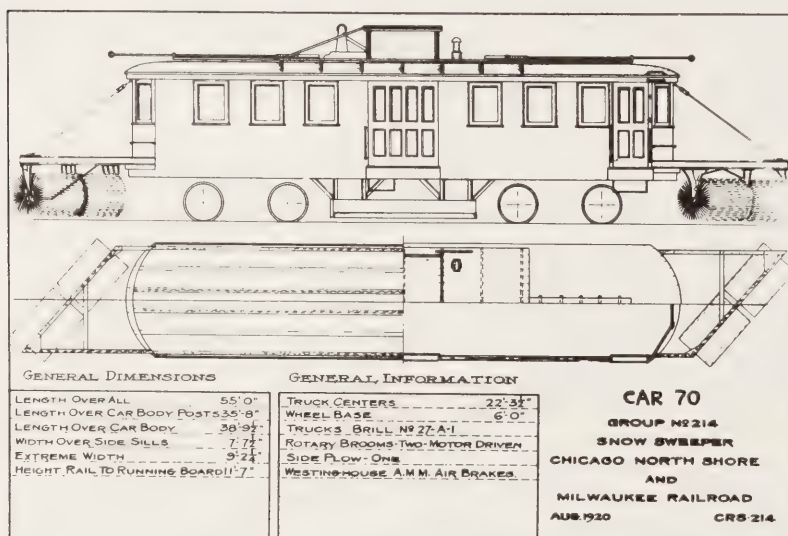
This unit had
brooms hung
from beams
removed in
summer so that
the car could
be used in work
service.

Summering on
a spare track at
Highwood yard
(below). (JJB)





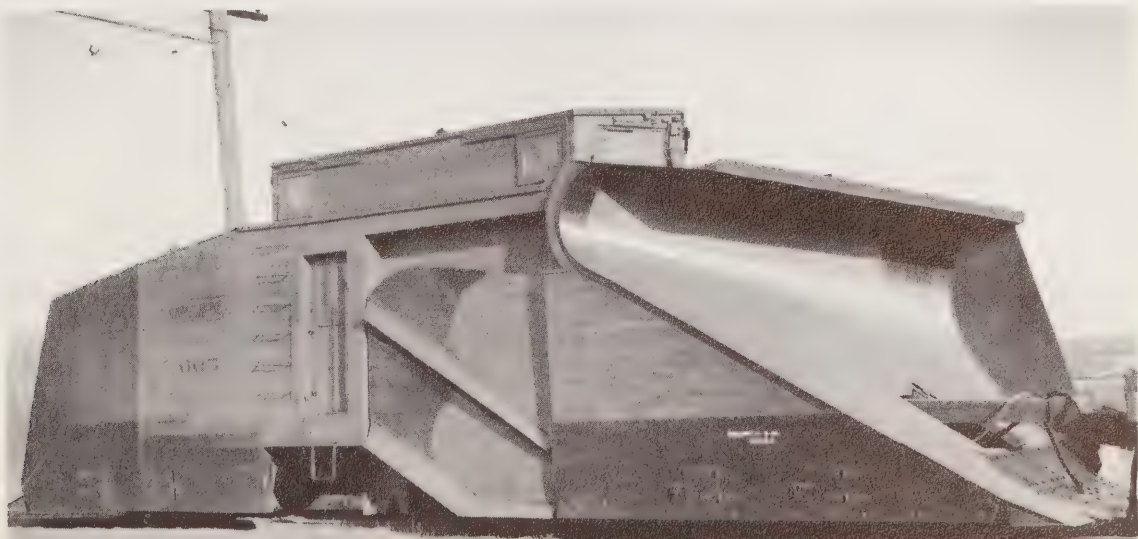
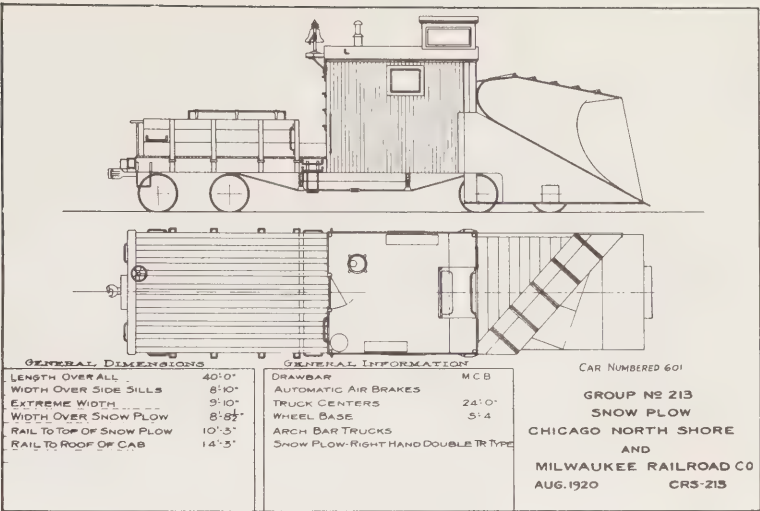
An even more versatile snow sweeper than #21 was the 70 (above and at right). It served in addition as a line car. (GK)

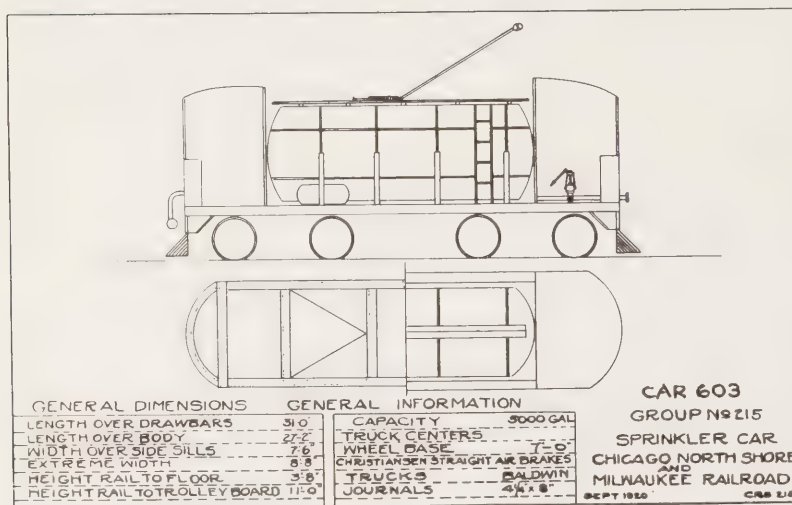
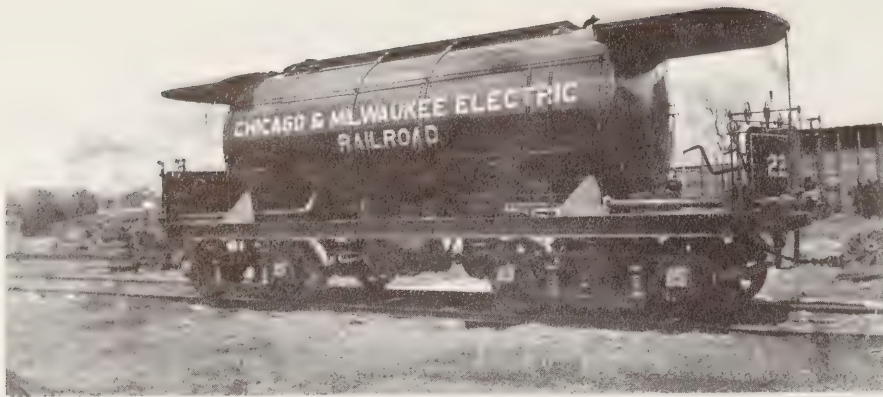


Final sweeper was a typical McGuire-Cummings unit, #608, used in Milwaukee.

The rather severe winters of south-eastern Wisconsin prompted early conversion of a gondola car into single-end snow plow #601 (at right and immediately below).

Built new for the same kind of job was double-end Russell plow #605 (at bottom of page). This unit is still retained as a backstop for blade plows 231 and 238, described on Page 152. (JJB)

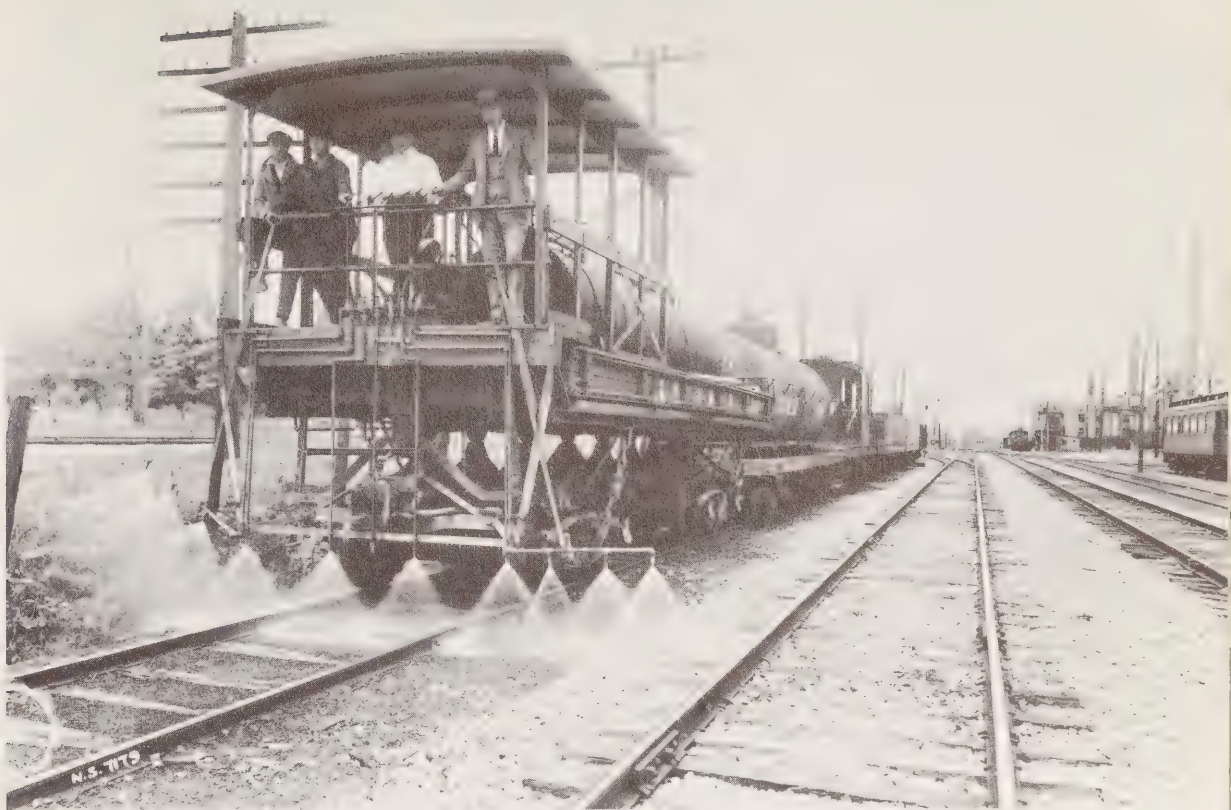




Service Cars

Sprinkler #22, later renumbered #603 as seen below, was assigned to street work on the long entry to Milwaukee. Actually the need for such a car disappeared long before the unit itself, which remained on the property until the late 1930's.





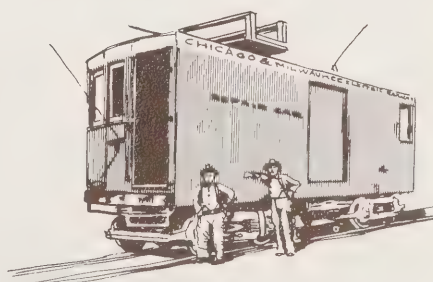
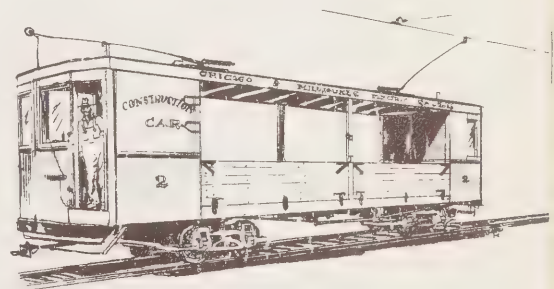
What a collection of levers, valves, and pipes was needed to throw the weed-killing spray just where needed! North Shore Line's two tank cars (#4000 is just behind the 1265, above) served principally to haul the reserve supply of poison. (WBC)

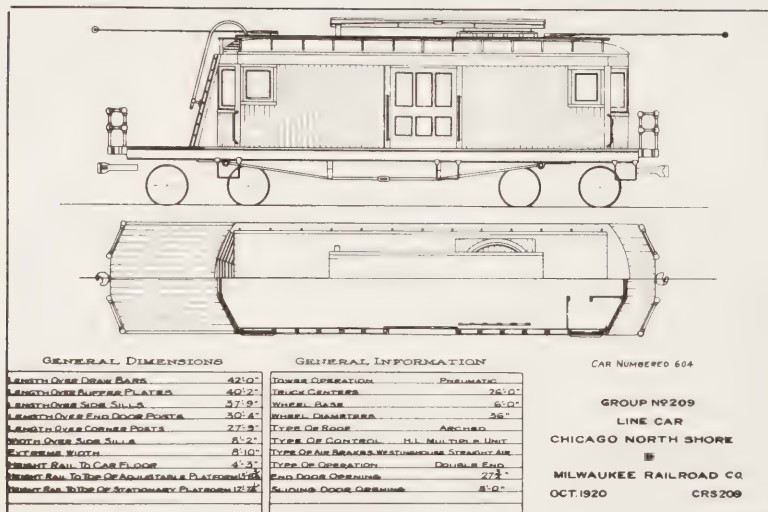
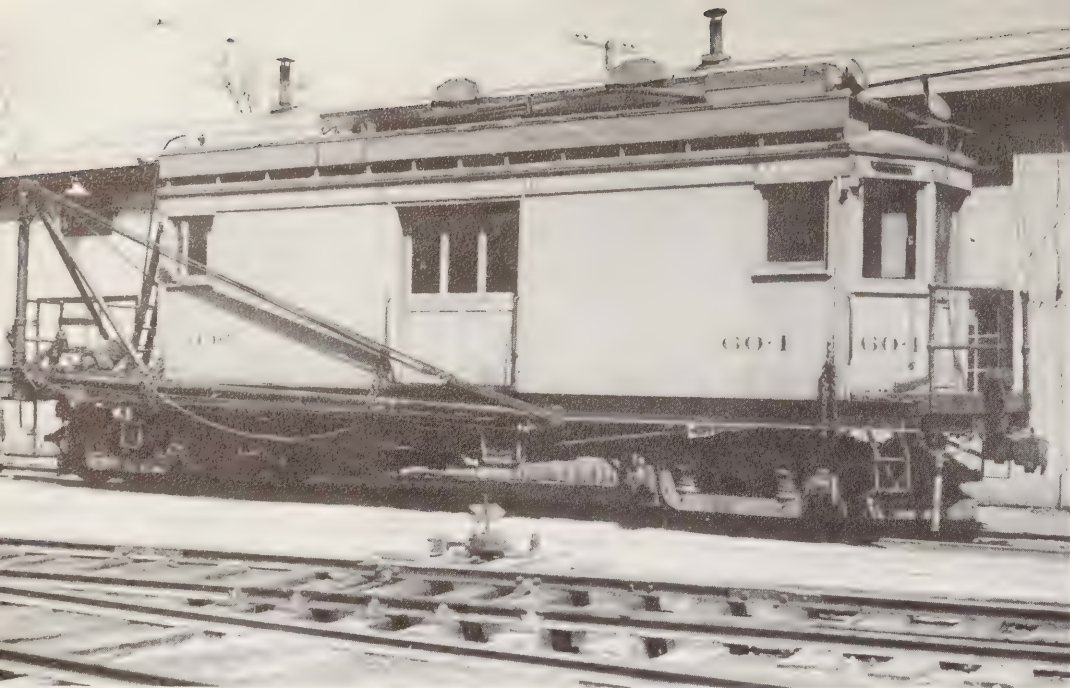
An early service unit was construction car #2 (below).



As would be expected of a long-lived railway powered by overhead trolley, North Shore Line has owned a succession of line vehicles.

"Repair car" #4 (at right) must have been one of its first tower cars. By the 1920's, a rubber-tired method to handle trolley wire maintenance over city streets without unduly disrupting streetcar schedules had made its appearance (above).





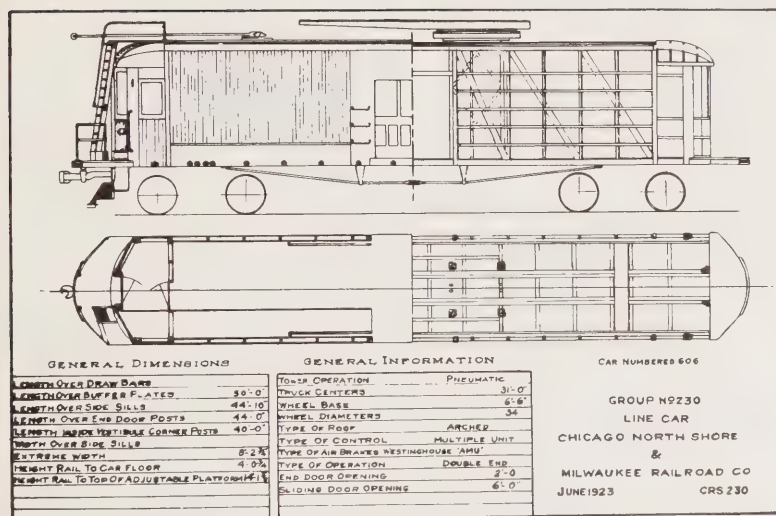
A line car which served the railway from 1911 to 1930 was rebuilt unit #602 (see Page 100).

Line car 604, shown on this page, was a handsome homemade unit. One of its unusual features is the stiff-leg derrick which can be used either as a posthole digger (below) or as a pole setter. The boom folds back compactly (above) and can be mounted on either side of the car.

(Photos: GK)



Line car 606 (at right) handles some routine maintenance work on the Shore Line Route. (CEK)

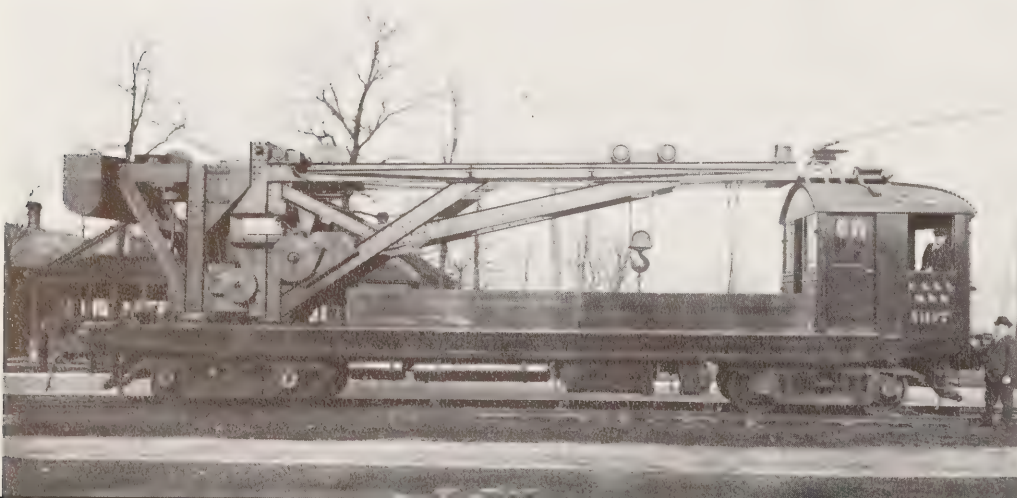
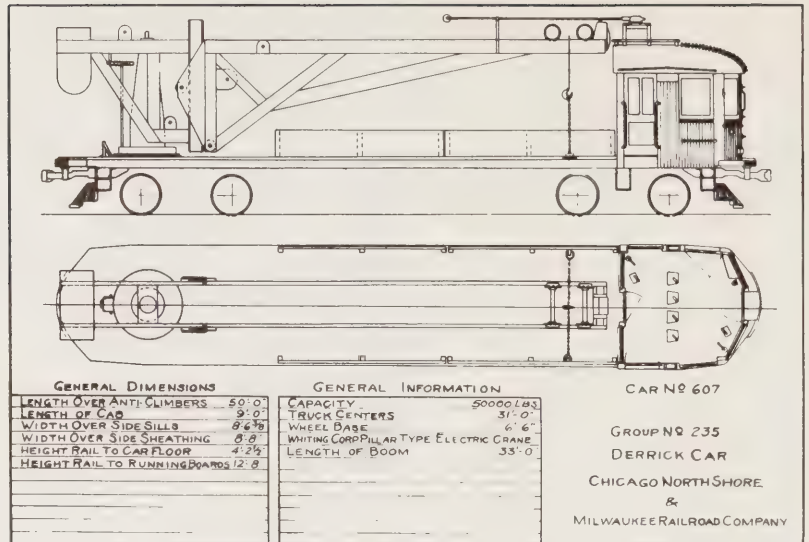


Newest line car, the 606, came in 1923 and today does most chores that do not require the 604's special equipment.

Green color scheme (below, GK) has since been replaced by the traction orange now used on most of North Shore Line's service equipment.



Derrick car 607 proved its worth both for lifting materials and for pulling a work train when needed. One day in 1938 (below) it served in the latter role, handling a work extra with three 2000-series gondolas and steam shovel #609. Note third-rail shoes. (GK)



At left: Master Mechanic Henry Cordell and the 607 when it was new in the 1920's.



Odd-job derrick car 1420 is a functional unit which still serves the railway when the need arises. Note wheel trolley for supplying electricity to the machinery; the car is a trailer. (NJ)

One of the pieces of construction equipment which helped to put together the Chicago & Milwaukee Electric shortly after the turn of the century was steam locomotive #2.







